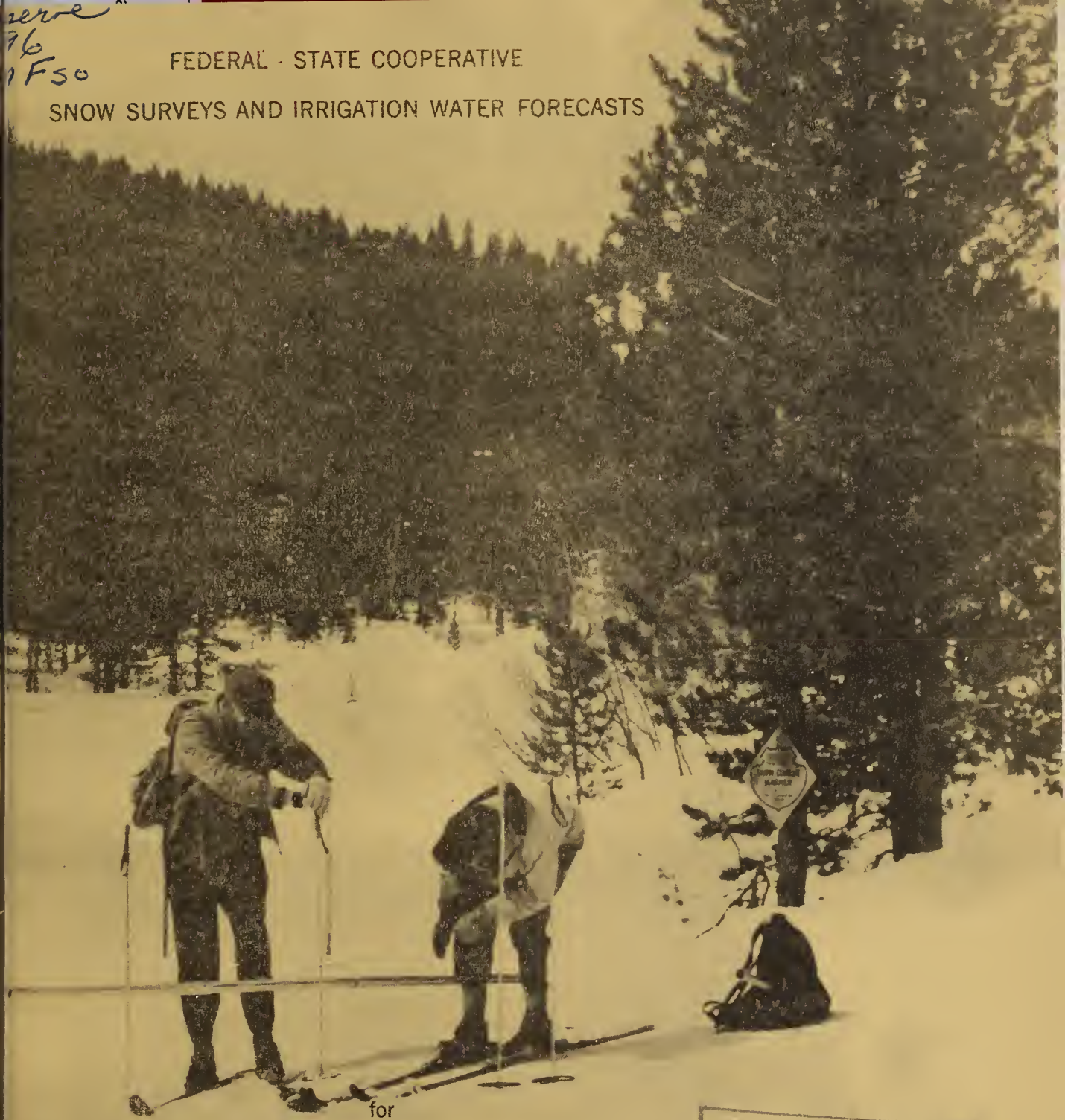
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FEDERAL - STATE COOPERATIVE

SNOW SURVEYS AND IRRIGATION WATER FORECASTS



for

Oregon

By

Division of Irrigation, Soil Conservation Service
United States Department of Agriculture
and
Oregon Agricultural Experiment Station

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U.S. DEPARTMENT OF AGRICULTURE

Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U. S. Forest Service, National Park Service and other Federal, State and local organizations.

As of
APR. 1, 1953

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY
AND WATER SUPPLY FORECAST REPORTS:

Forecasts by U. S. Weather Bureau of total annual streamflow October-September, inclusive, at more than 300 gaging stations are issued monthly January through May in the publication WATER SUPPLY FORECASTS FOR THE WESTERN UNITED STATES.

Weather Bureau forecasts of runoff presented in this bulletin are computed from procedures based on mathematical analysis of the relation between precipitation and runoff.

The Weather Bureau bulletins may be secured by writing to:

Hydrologist in Charge
River Forecast Center
U. S. Weather Bureau
712 Federal Office Building
Kansas City 6, Missouri

FEDERAL-STATE COOPERATIVE

SNOW SURVEYS AND WATER FORECASTS

FOR

OREGON

Report Prepared
by

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and
Manes Barton, Assistant Water Forecaster

Issued

April 9, 1953

Division of Irrigation Engineering
Soil Conservation Service
and
Oregon Agricultural Experiment Station
P. O. Box 1149
Medford, Oregon

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INDEX TO SNOW COURSES

Number	Name	Elev.
	UPPER COLUMBIA DRAINAGE (Lower Snake in Oregon)	
	OWYHEE RIVER	
Nov. 5	Big Bend	6700
Nov. 7	Fry Canyon	6700
Nov. 5	Gold Creek	5600
Nov. 9	Jack Creek, Lower	6800
Nov. 10	Jack Creek, Upper	7250
Nov. 8	Rodeo Flat	6600
Ida. 12	Silver City	6400
Ida. 13	South Mountain No. 2	5340
Nov. 12	Taylor Canyon	6200
	(The following courses are adjacent to but not on Owyhee Drainage and partially reflect snow conditions on this watershed.)	
Nov. 1	Bear Creek	7600
Nov. 2	Buckskin, Lower	6700
Nov. 2	Buckskin, Upper	7200
Nov. 2	Fox Creek	5600
Nov. 4	Granite Peak	7600
Nov. 3	Martin Creek	5700
Nov. 6	Midas	7200
Nov. 11	Tremewan Ranch	5700
Nov. 4	76 Creek	7100
	MALHEUR RIVER	
133	Blue Mountain Spring	5900
137	Crane Prairie	5375
136	Lake Creek	5120
134	Rock Spring	5100
135	Stinking Water	4800
	BURNT RIVER	
143	Barney Creek	5950
141	Blue Mountain Summit	5096
142	Tipton	5100
	POWDER RIVER	
155	Anthony Lake	7125
154	Bourne	5800
156	Dooley Mountain	5430
151B	Eilertson Meadows	5400
157	Goodrich Lake	6775
	PINE CREEK	
161	Schneider Meadows	5400
	IMNAHA RIVER	
171	Coverdale	4250
	GRANDE RONDE RIVER	
163	Aneroid Lake No. 1	7480
163A	Aneroid Lake No. 2	7000
166	Beaver Reservoir	5340
167	Camp Carson	5970
166A	Moss Spring	5650
164	Summit Springs	6000
165	Taylor Green	5740

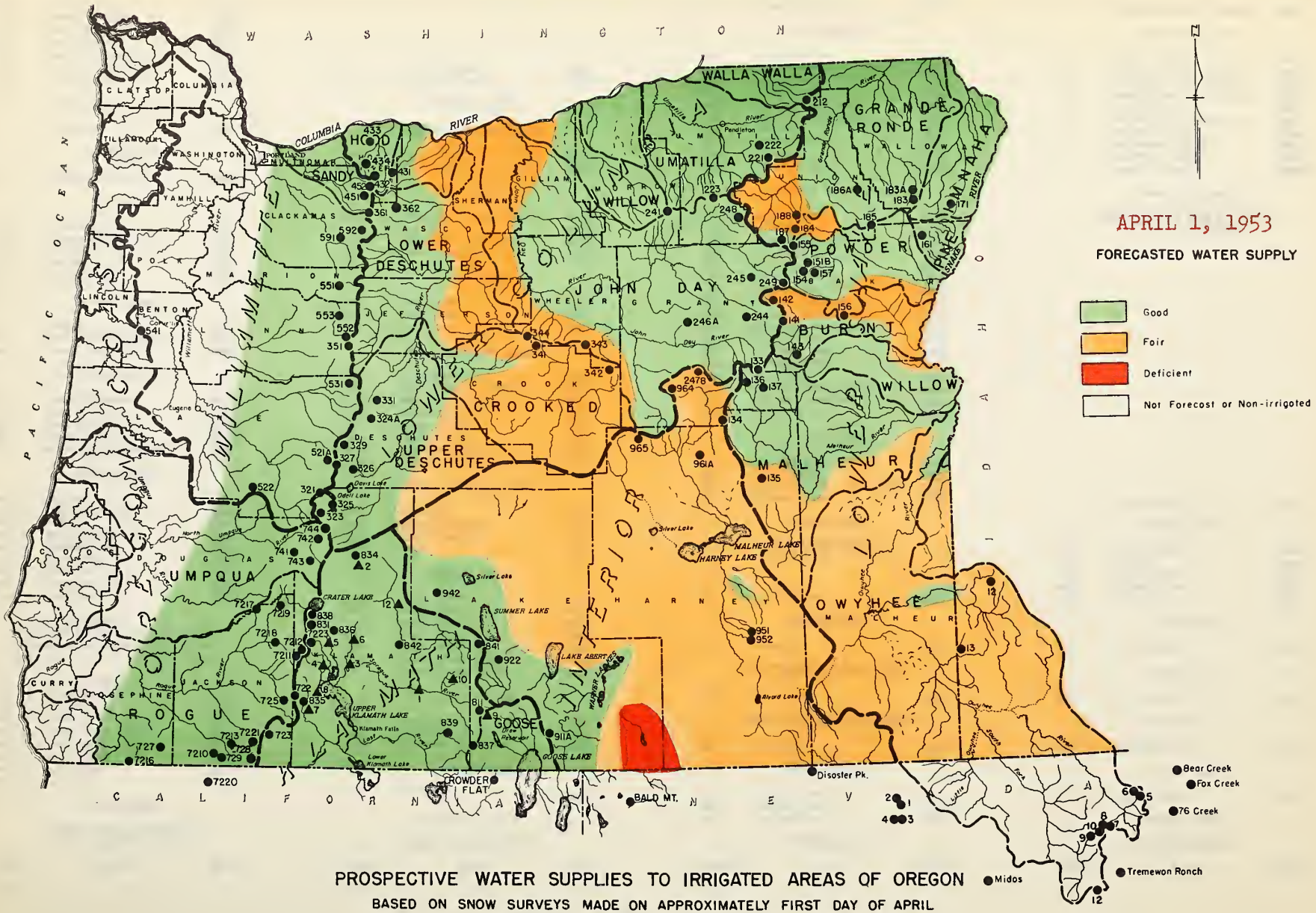
Number	Name	Elev.
	LOWER COLUMBIA DRAINAGE	
	WALLA WALLA RIVER	
212	Tollgate	5070
	UMATILLA RIVER	
222	Emigrant Springs	3925
223	Lucky Strike	5050
221	Meacham	4300
	JOHN DAY RIVER	
241	Arbuckle Mountain	5400
246A	Beech Creek Summit	4800
244	Dixie Springs	5650
249	Gold Center	5340
245	Olive Lake	6000
248	Schoolmarm	4775
247B	Starr Ridge	5156
	CROOKED RIVER	
343	Derr	5670
344	Marks Creek	4540
341	Ochoco Meadows	5200
342	Tamarack	4800
	UPPER DESCHUTES RIVER	
326	Caldwell Ranch	4400
321	Cascade Summit	4860
327	Charlton Lake	5750
325	Crescent Lake	4760
329	Irish-Taylor	5500
324A	New Dutchman Flat	5400
331	Three Creeks Meadows	5600
323	Willamette Pass	5600
	LOWER DESCHUTES RIVER	
351	Clear Lake	3500
351	Hogg Pass	4755
362	Rock Creek	4200
	HOOD RIVER	
431	Brooks Meadows	4300
433	Greenpoint Reservoir	3400
434	Red Hill	4400
432	Tilly Jane - Mt. Hood	6000
	SANDY RIVER	
452	Phlox Point - Mt. Hood	5600
451	Still Creek	3700
	WILLAMETTE RIVER BASIN	
	Clackamas River	
592	Clackamas Lake	3400
591	Peavine Ridge	3500

Number	Name	Elev.
	Santiam Rivers	
551	Breitenbush	2325
553	Marion Forks	2730
552	Santiam Junction	3990
	McKenzie River	
531	McKenzie	4800
	Middle Fork Willamette River	
521A	Waldo Lake	5500
	Coast Fork Willamette River	
522	Champion	4500
	Mary's River	
541	Mary's Peak	3620
	OREGON COAST DRAINAGE	
	UMPQUA RIVER	
743	Diamond Lake	5315
742	N. Umpqua nr. Lake Creek	4215
741	Trap Creek	3800
744	Windigo Pass	5800
	ROGUE RIVER	
721B	Althouse	4400
729	Big Red Mountain	6500
722	Billie Creek Divide	5300
725	Fish Lake	4865
723	Fourmile Lake	6000
727	Grayback Peak	6000
721	Hobart Lake	5010
723	Hyatt Prairie Reservoir	4900
7210	Little Red Mountain	5500
7220	Soragg Mountain	5200
7211	Seven Lakes No. 1	6600
7212	Seven Lakes No. 2	6200
7219	Silver Burn	3720
726	Siskiyou Summit	4630
7216	South Fork Canal	3500
7215	Wagner Butte	6900
7217	Whaleback	5140
	KLAMATH LAKE BASIN	
631	Annie Spring	6016
834	Chemult	4760
Calif.	Crowder Flat	5200
639	Gerber	4850
635	Lake of the Woods	4960
838	Park Headquarters	6450
637	Strawberry	5600
841	Summer Rim	7200
835	Sun Mountain	5350
642	Taylor Butte	5100
	GOOSE LAKE BASIN	
611	Quartz Mountain	5320

Number	Name	Elev.
	INTERIOR DRAINAGE	
	WARNER LAKE	
911A	Camas Creek	5720
	GUANO LAKE	
Nov. 1	Bald Mountain	6720
	CHEWAUCAN RIVER	
922	Mill Creek	5200
	SILVER LAKE	
942	Silver Creek	4900
	HARNEY BASIN	
952	Fish Creek	7900
951A	Idlewild Camp	5200
964	Izee Summit	5293
951	Silvies	5900
965	Snow Mountain	5300
	McDERMITT CREEK	
Nov. 6	Disaster Peak	6500

THE CALIFORNIA OREGON POWER COMPANY SNOW STATIONS

	KLAMATH LAKE BASIN	
1	Beatty (COPCO)	4400±
2	Chemult (COPCO)	4761
3	Chiloquin (COPCO)	4167
4	Crystal (COPCO)	4200
5	Fort Klamath (COPCO)	4150
6	Kirk (COPCO)	4533
7	Lake of the Woods (COPCO)	4960
8	Merriman Lodge (COPCO)	4200
10	Bly 101 Ranch (COPCO)	4800±
12	Yamsey (COPCO)	4600
	GOOSE LAKE BASIN	
9	Quartz Mountain (COPCO)	5500



U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE

SCS-PORTLAND, ORE. FEB. 1953

FINAL WATER SUPPLY OUTLOOK FOR OREGON

April 1, 1953

Oregon's 1953 water supply outlook, dependent on mountain snow cover, is "fair" to "good" with deficiencies to be expected only in the smaller streams heading in low elevation watersheds. Reservoired water in 25 reporting reservoirs is 120 percent of average and will "save the day" for water users in many areas otherwise deficient. Effects of last year's long summer and fall drought have been largely offset by heavy winter precipitation and present mountain snow cover. Crop-land soils have an excellent moisture content.

Water content of mountain snow cover averages 109 percent of normal State-wide on 124 measured snow courses, but only 70 percent of last year at this date. Water content of snow above 5,000 feet averages 112 percent normal and 74 percent of last year. Water content of snow below 5,000 feet averages 101 percent normal and 61 percent of last year.

Streamflow is forecast at average to above average throughout the State with the exception of streams heading in low elevation watersheds where deficiencies are expected. Reservoired water will "brighten the picture" for most of these otherwise deficient areas.

Reservoired water supplies are generally excellent with 25 reporting reservoirs averaging 120 percent normal and 68 percent of capacity. Of the 25 reporting reservoirs, 13 are 85 percent full or better, and all but one (Cottonwood which is expected to fill) are 50 percent full or better.

Moisture content of the soils throughout the State is good at the lower and moderate elevations. However, moisture of the soil under the snow at higher elevations has not yet reached field capacity.

State-wide precipitation during March was 108 percent average.



FINAL OREGON STREAMFLOW FORECASTS - April 1, 1953

The following summarized runoff forecasts are based on mountain snow cover and on the assumption that precipitation and temperature during the runoff season will be approximately normal. Appreciable deviations from normal of temperature and/or precipitation, expecially during April, May or June, will correspondingly modify these forecasts.

BASIN AND STREAM	Seasonal Streamflow in Thousand A.F.					
	Forecast 1953		%	Measured Runoff*		10-Yr.
	Apr-Sept.	Apr-July	10-Yr. Avg.	1951	1950	Avg. 1941-50
Columbia R., nr. The Dalles[1]			109,986.0			93,825.0
	80,000.0		85	117,528.0		
NORTHCENTRAL OREGON						
Hood R., nr. Hood River[2]	296.0		93	358.8	497.6	318.8
Hood R., nr. Hood River[2]		250.0	93	305.0	428.2	270.4
Hood R., W. Fk., nr. Dee	140.0		90	156.4	228.6	155.3
Hood R., W. Fk., nr. Dee		122.0	91	135.4	199.6	134.4
White R., below Tygh Valley	142.0		92	202.6	233.1	155.0
White R., below Tygh Valley		128.0	92	184.3	212.1	139.4
UMATILLA-WALLA WALLA						
Walla Walla R., So. Fk., nr. Milton	60.0		83	73.5	88.3	72.2
Walla Walla R., So. Fk., nr. Milton		48.0	81	58.7	72.5	59.4
Umatilla R., nr. Gibbon	55.0		59	77.2	106.7	92.9
Umatilla R., at Pendleton	110.0		60	138.0	213.0	182.5
Umatilla R., at Pendleton		107.0	60	133.8	208.0	177.5
McKay Cr., nr. Pilot Rock	20.0		63	17.6	39.9	31.9
McKay Cr., nr. Pilot Rock		19.5	62	17.5	39.8	31.6
NORTHEASTERN OREGON						
Grande Ronde R., at La Grande	140.0		71	165.1	235.8	199.2
Catherine Cr., nr. Union	82.0		114	62.7	67.1	71.8
Bear Cr., nr. Wallowa	89.0		122	56.5	75.5	73.2
Lostine R., nr. Lostine	152.0		119	110.0	137.7	127.8
Hurricane Cr., nr. Joseph	54.0		117	41.0	42.8	46.2
Wallowa R., E. Fk., Nr. Joseph[3]	13.8		122	9.8	10.8	11.6
Wallowa R., E. Fk., nr. Joseph[3]		12.0	129	7.5	8.5	9.3
Imnaha R., at Imnaha	350.0		115	267.5	287.7	303.0
Powder R., at Salisbury	58.0		90	69.8	66.1	64.3
Powder R., at Salisbury		57.0	91	68.8	64.0	62.4
Burnt R., nr. Hereford[4]	31.0		70	43.0	49.7	43.6

*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1952 records not available at this time.

[1]Forecast by Boise Office, Soil Conservation Service.

[2]Observed flow plus P.P.&L.Co. power canal.

[3]Includes power plant tailrace.

[4]Observed flow plus change in storage in Unity Reservoir.

Final Oregon Streamflow Forecasts - April 1, 1953 (Cont'd)

BASIN AND STREAM	Seasonal Streamflow in Thousand A.F. Forecast 1953 Apr-Sept.	Apr-July	% 10-Yr. Avg.	Measured Runoff* 1951	1950	10-Yr. Avg. 1941-50
EASTERN OREGON						
Malheur R., nr. Drewsey	70.0		92	72.3	63.3	75.9
Malheur R., N.Fk., at Beulah[5]	58.0		93	54.4	63.6	62.2
Owyhee Res., not inflow[6]	270.0		67	417.8	326.2	400.0
Owyhee Res., not inflow[6]		260.0	68	396.2	297.1	379.6
John Day R. at Prairie City[7]	47.0		89	44.3	43.1	52.9
John Day R. at Prairie City[7]		43.0	90	40.7	38.9	47.5
John Day R., Mid.Fk.at Ritter	112.0		88	115.4	125.8	127.4
John Day R., N.Fk., nr. Dale	230.0		88	255.8	267.7	261.1
Strawberry Cr.,nr.Prairie City	7.0		83	7.9	7.1	8.4
HARNEY BASIN						
Silvies R., nr. Burns	70.0		71	116.4	83.8	97.7
Donner und Blitzen R., nr. Frenchglen	50.0		77	58.7	57.1	65.0
Trout Cr., nr. Denio	6.0		71	8.2	6.0	8.5
CENTRAL OREGON						
Crooked R., nr. Post	65.0		53	128.0	141.2	121.9
Ochoco Res., not inflow[8]	20.0		67	c	32.8	29.9
Crescent Cr. at Crescent Lake[9]	23.4		123	c	35.0	19.0
Little Deschutes R.,nr.Lapine[9]	84.0		99	c	137.1	85.0
Little Deschutes R.,nr.Lapine[9]		77.0	103	c	121.3	75.4
Odell Cr., nr. Crescent	33.1		114	36.0	40.3	29.0
Deschutes R., below Snow Cr.	67.0		116	c	79.4	57.9
Crane Prairie Res., inflow[10]	129.0		111	c	155.3	115.8
Deschutes R.,at Pringle Falls[11]	287.0		109	c	330.3	263.9
Deschutes R.,at Pringle Falls[11]		176.0	111	c	179.0	158.6
Deschutes R., at Bonham Falls[12]	518.0		108	c	632.0	480.4
Deschutes R., at Bonham Falls[12]		351.0	109	c	416.6	322.4
Tumalo Cr., nr. Bend[13]	52.5		109	c	60.4	48.0
Squaw Cr., nr. Sisters	55.2		114	c	60.5	48.5

*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1952 records not available at this time.

[5]Observed flow + change in storage in Agency Valley Reservoir.

[6]From U.S.B.R. records of inflow.

[7]Observed flow + Prairie Power Canal.

[8]Observed flow of Ochoco Cr. + Canal + changes in storage of Ochoco Res.

[9]Observed flow + changes in storage of Crescent Lake Reservoir.

[10]From State Engineer's file #3220a, tabulating total inflow to Crane Prairie Reservoir and outflow, showing the loss in the Reservoir.

[11]Observed flow + changes in storage in Crane Prairie and Wickiup Res.

[12]Observed flow + changes in storage in Crane Prairie, Wickiup and Crescent Lake Reservoirs.

[13]Observed flow + Columbia Southern Canal.

[c]Records not available.

Final Oregon Streamflow Forecasts - April 1, 1953 (Cont'd)

BASIN AND STREAM	Seasonal Streamflow in Thousand A.F. Forecast 1953 Apr.-Sept.	Apr.-July	% 10-Yr. Avg.	Measured Runoff* 1951	1950	10-Yr. Avg. 1941-50
SOUTHCENTRAL OREGON						
Chewaucan R., nr. Paisley		68.0[a]	106	88.4[a]	67.2[a]	64.4[a]
Deep Cr., above Adel		66.0[a]	103	71.9[a]	70.3[a]	63.9[a]
Drew Reservoir, net Inflow	26.0		100	b	b	26.1[b]
KLAMATH BASIN						
Sprague R., nr. Chiloquin	292.0		133	282.2	207.3	219.1
Williamson R., below Sprague R.	456.0		126	457.6	354.4	361.5
Williamson R., below Sprague R.		380.0	128	391.4	292.8	296.8
Upper Klamath Lake, net Inflow[14]	620.0		134	611.0	423.9	462.9
Upper Klamath Lake, net Inflow[14]		510.0	140	509.3	333.1	364.3
Clear Lake Res., net Inflow	23.0		58	32.4	33.9	39.6
Gerber Res., net Inflow	13.0		72	12.3	14.5	18.1
SOUTHERN OREGON						
Applegate R., nr. Ruch	150.0		130	c	140.2	114.8
Illinois R., at Kerby	208.0		112	114.4	185.0	185.8
Hyatt Res., net Inflow[15]	6.1		105	3.8	6.3	5.8
Fourmile Lake, net Inflow[16]	7.8		100	c	8.6	7.8
Little Butte Creek, N. Fk., below Fish Lake[17]	14.3		100	c	17.9	14.3
Rogue River above Prospect	391.0		128	345.5	380.5	305.1
Rogue River above Prospect		355.0	129	282.3	322.2	255.0
Rogue River, Mid. Fk., nr. Prospect[18]	85.0		115	77.8	82.5	73.6
Rogue River, Mid. Fk., nr. Prospect[18]		68.0	117	59.7	65.4	58.3
Rogue R., So. Fk., nr. Prospect[19]	83.0		111	76.2	91.8	74.6
Rogue R., So. Fk., nr. Prospect[19]		73.0	115	64.4	79.8	63.2

*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1952 records not available at this time.

[14] From COPCO records of inflow.

[15] Observed flow of Keene Creek at Hyatt Prairie + storage changes + 1600 a.f. for estimated evaporation during April-September period.

[16] Observed outflow into Cascade Canal + storage changes + 1600 a.f. for estimated evaporation during April-September period.

[17] Observed flow plus changes in storage in Fish Lake Reservoir + 90% of Cascade Canal inflow.

[18] Observed flow + Middle Fork Power Canal.

[19] Observed flow + South Fork Power Canal.

[a] April-June rather than April-July.

[b] Records from 1952 to date are partially incomplete.

[c] Records not available.

Final Oregon Streamflow Forecasts - April 1, 1953 (Cont'd)

BASIN AND STREAM	Seasonal Streamflow in Thousand A.F.					
	Forecast 1953		%	Measured Runoff*		10-Yr.
	Apr.-Sept.	Apr.-July	10-Yr. Avg.	1951	1950	Avg. 1941-50
SOUTHERN OREGON (Cont'd)						
Rogue R., below South Fork	790.0		120	739.0	808.8	656.9
Rogue R., below South Fork		690.0	129	588.4	662.0	532.4
Rogue R., at Raygold, nr. Central Point	1190.0		124	887.7	1057.6	882.3
Rogue R., at Raygold, nr. Central Point		980.0	133	727.4	900.3	739.7
Clearwater R., above Trap Cr.	78.0		126	80.8	71.1	62.0
No. Umpqua River, below Lake Creek	210.0		131	195.7	189.0	160.5
No. Umpqua River, at Tokotee Falls[20]	470.0		126	445.3	467.4	372.9
Rogue R., at Grants Pass	1050.0		120	823.9	1061.8	857.8
WILLAMETTE VALLEY						
Willamette River, Mid. Fork, At Lowell	936.0		109	796.9	1170.0[a]	855.0[a]
McKenzie River at McKenzie Bridge	612.0		109	658.4	771.8	562.5
McKenzie River, nr. Vida	1312.0		108	1276.0	1725.2	1214.0
Clackamas R., at Big Bottom	162.0		99	192.8	235.4	163.4
Clackamas R., at Big Bottom		135.0	102	155.9	196.1	132.5
Clackamas R., nr. Cazadero	760.0		95	c	1158.3	796.3

*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1952 records not available at this time.

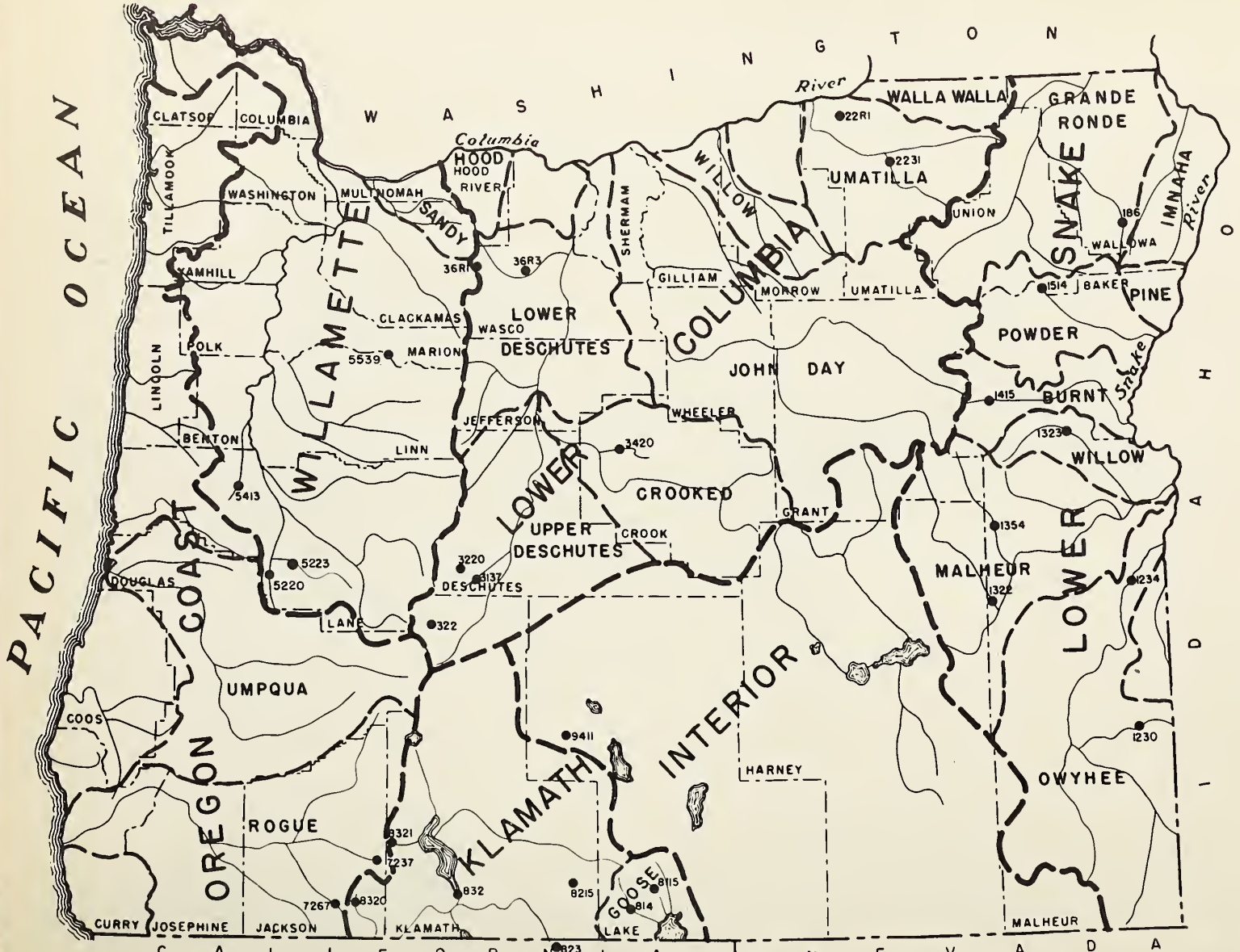
[20]Sum of observed flow at North Umpqua River above Clearwater River (#7424) and Clearwater River at Mouth (#7423)

[a]Estimated as percentage of flow at Eula.

[c]Data not available



IMPORTANT OREGON RESERVOIRS



RESERVOIR NAME	NUMBER
Agency Valley	1354
Antelope	1230
Clear Lake	823
Clear Lake	36R1
Cold Springs	22R1
Cottage Grove	5220
Cottonwood	8115
Crane Prairie	3220
Crescent Lake	322
Detroit	5539
Doreno	5223
Drew Creek	814
Emigrant Gap	7267
Fern Ridge	5413
Fish Lake	7237
Four Mile Lake	8321
Gerber	8215
Hyatt Prairie	8320
McKay	2231
Ochoco	3420
Owyhee	1234
Rock Creek	36R3
Thief Valley	1514
Thompson Valley	9411
Unity	1415
Upper Klamath Lake	832
Wallowa Lake	186
Warm Springs	1322
Wickiup	3137
Willow Creek No. 3	1323

N

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SCALE IN MILES

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE
RESEARCH
M. L. NICHOLS, Chief
7-L-3060

STATUS OF OREGON RESERVOIR STORAGE - APRIL 1, 1953

BASIN AND STREAM	RESERVOIR	USABLE CAPACITY (Thousand Acre Feet)	THOUSAND ACRE FEET IN STORAGE ABOUT APRIL FIRST 1953	1952	1951	1950	10-yr.Avg. 1941-50
		UPPER COLUMBIA DRAINAGE					
		Lower Snake in Oregon					
Owyee	Antelope	36.5	19.3	13.3	33.0	22.2	17.1
	Owyhee	715.0	574.4	539.2[g]	715.0	529.8	566.0
Malheur	Warm Springs	191.0	167.0	97.9	82.6	45.8	121.7
	Agency Valley	60.0	47.0	40.1[g]	32.8	34.6	50.5
	Willow Creek #3	21.0	15.0[f]	12.0[f]	3.5	2.9	10.0[f]
Burnt	Unity	25.2	14.9	7.1[g]	14.7	6.3	14.2
Powder	Thief Valley	17.4	N.R.	N.R.	17.4[f]	11.0[f]	15.8[f]
Grande Ronde	Wallowa Lake	40.9	27.8	11.4	17.9	11.9	20.6
		LOWER COLUMBIA DRAINAGE					
Umatilla	McKay	74.0	66.5	44.6	64.3	65.7	61.0
	Cold Springs	50.0	44.5	50.0[g]	50.0	45.4	47.9
Deschutes	Ochoco	46.0	46.8	33.0[g]	43.2	18.0	27.0
	Crescent Lake	54.9	52.0	47.3	49.0	52.8	40.6
	Crane Prairie	55.3	50.7	47.1	54.6	47.1	37.1
	Wickiup	180.0	198.9	177.7	188.0	185.3	96.5[d]
Willamette	Cottage Grove	30.1[a]	19.8	19.4	19.6	19.4	18.0[d]
	Dorena	70.5[a]	35.7	35.6	35.2	36.1	--
	Fern Ridge	94.2[a]	65.4	63.7	62.8	62.8	54.8[e]
	Detroit	340.0[a]	150.9[j]	--	--	--	--
		INTERIOR DRAINAGE					
Silver Lake	Thompson Valley	17.4	N.R.	N.R.	N.R.	5.2	7.4[f]
		WEST COAST DRAINAGE					
Rogue	Fish Lake	7.8	6.8	5.7	6.1	4.9	4.7
	Fourmile Lake[b]	16.1	14.7	6.3	12.6	7.8	6.1
	Emigrant Gap	8.3	8.3	8.3	8.2	8.4	7.8
	Hyatt Prairie[b]	16.1	13.2	4.6	6.7	4.7	6.0
Klamath	Upper Klamath Lk.	584.0[c]	503.0	382.6	500.9	478.5	425.1
	Gerber	94.0	77.1	26.2	57.6	42.0	44.8
	Clear Lake	440.2	280.6	156.8	139.3	149.3	248.8
Goose Lake	Cottonwood	4.1	1.9	h	2.9	3.0	1.1
	Drew	62.5	54.0	45.2	63.0	54.3	46.6

N.R.--No Report.
[a]Storage space reserved for flood control.
[b]By ditch to Rogue River side from Klamath Drainage.
[c]Based on gage zero elevation of 4135.0.
[d]1943-50.
[e]1942-50.
[f]Partly estimated.
[g]Spilling.
[h]Not full; spilling.
[j]Gross Storage.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Oregon stream basins presents the water content of the snow about April 1, 1953, as percent of the same date in 1952 and 1951 and average of record.

DRAINAGE	No. of Courses Averaged	Yrs. of Record	April 1, 1953 Water Content as percent of 1952	1951	Avg.
UPPER COLUMBIA DRAINAGE (Lower Snake in Oregon)					
Owyhee River	12-18	11-25	42	78	75
Malheur River	5	12-23	68	105	124
Burnt River	3-4	14-18	82	110	126
Powder River	7	14-17	88	106	115
Pine Creek	1	15	87	128	131
Imnaha River	2	11-18	101	113	127
Grande Ronde River	10-11	11-24	95	109	115
Wallowa River	2	11-18	101	113	127
Catherine Creek	2	15	91	120	109
Main Grande Ronde	6-7	13-24	94	104	109
LOWER COLUMBIA DRAINAGE					
Walla Walla River	1	22	84	104	108
Umatilla River	5	14-24	98	111	119
Willow Creek	1	24	119	133	161
John Day River	11-12	14-24	90	113	124
North Fork	5	14-24	101	116	128
Middle Fork	3-4	17-18	85	113	120
Main Branch	4	16-23	81	113	122
South Fork	1	17	63	88	113
Crooked River	3	15-24	65	95	110
Deschutes River	10-11	12-24	73	85	118
Hood River	3	15-20	84	82	109
Willamette Valley	12-14	12-23	72	86	112
Sandy River	3	15-21	83	80	105
Clackamas River	3	12-21	69	62	85
Santiam Rivers	3	12-14	73	89	114
McKenzie River	3	12-14	80	97	106
Middle Fork	3-4	12-23	64	91	115
Coast Fork	1	14	54	107	111
Mary's River	1	12	52	--	115
PACIFIC COASTAL STREAMS					
Umpqua River	4	13-24	69	114	131
Rogue River	11-14	11-22	68	133	125
Upper Rogue	4-5	15-19	69	108	121
Bear-Little Butte Creek	2-4	18-22	68	137	115
Applegate River	5	11-18	73	167	135
Illinois River	2	16-17	51	189	114

COMPARISON OF SNOW COVER - (Cont'd)

DRAINAGE	No. of Courses Averaged	Yrs. of Record	April 1, 1953 Water Content as percent of 1952	1951	Avg.
PACIFIC COASTAL STREAMS (Cont'd)					
Klamath Lake Basin	16-19	12-26	56	76	118
Williamson River	6	16-21	101	160	121
Sprague River	6	12-25	49	130	127
Gerber-Clear Lake Basin	2-3	12-22	42	131	115
Goose Lake Basin	3	12-22	46	109	112
INTERIOR DRAINAGE					
Warner Lake Basin	1	14	53	92	107
Guano Lake Basin	1	13	4	31	12
Silver Lake Basin	1	12	0	0	0
Chewaucan River	3	14-22	64	136	145
Harney Basin	8	12-22	52	81	99
Alvord Lake Basin	1	4	28	93	58
McDermitt Creek	1	4	28	93	58

IRRIGATION WATER SUPPLY FORECASTS

SEASON OF 1953

- Foreword -

Measurements of snow depth and water content were secured on all Oregon snow courses as near April 1 as possible. Watershed soil moisture determinations usually made at 12 scattered points were again not obtained this year due to shortage of personnel and funds.

Local Water Forecast Committee Meetings were held again this year in nine important irrigated regions of the State during the period March 30 through April 7 as follows: The Dalles for Northcentral Oregon; Prineville for Central Oregon; Burns for Harney Basin; Canyon City for John Day Basin; Pendleton for Umatilla-Walla Walla Basin; La Grande for Northeastern Oregon; Ontario for Southeastern Oregon; Lakeview for Southcentral Oregon; and Medford for Southern Oregon.

These water meetings were jointly sponsored this year by U. S. Soil Conservation Service, Oregon State College Experiment Station and U. S. Weather Bureau. A representative of each of the three agencies was present at all meetings. Most of the 38 cooperating agencies listed on the last page of this report were represented at these discussions.

Each Committee's report outlining the irrigation water prospect for 1953 in its respective area is summarized below. Modifications of these forecasts may be required later in accordance with deviations of precipitation and temperature from normal during the runoff season.

- Forecasts -

Northcentral Oregon

Fair to good water supplies for irrigation are expected in Hood River and Wasco Counties in 1953 although the mountain snow cover contains water only 75 to 113 percent of the ten year average, 1941-1950. Water regulation which usually cuts off holders of late water rights is expected to become effective in early July on most smaller streams.

Hood River Valley lands served from the West Fork of Hood River should have adequate water with the expected flow of that stream set at 140,000 acre feet or 90 percent of the average for the April-September period. The first four months, April through July, should bring 122,000 acre feet which is about the normal distribution.

Flow of the Middle and East Forks of Hood River is not gaged, but these streams should bring satisfactory water supplies this irrigation season.

Discharge of Hood River at Powerdale plus the Power Canal is forecast for 296,000 acre feet or 93 percent of the average for the next six months. Not since 1947 when the discharge was 242,000 acre feet has

this stream dropped to this low a flow. The April-July discharge is estimated to be 250,000 acre feet.

Lands on the West side of Hood River Valley served from the Mount Defiance-Greenpoint source will have less water than last year. Water content of the snow is now 9.0 inches compared with 22.1 inches in 1952 and 8.8 inches in 1951.

Soils in Hood River Valley are reported to be very well wetted at this date.

Snow cover on Wasco County watersheds as represented by the measurement at Brooks Meadows now contains 10.4 inches of water compared with 17.2 inches last year and the ten year average of 13.2 inches. Clear Lake snow has 10.3 inches compared with 17.8 last year and 13.7 inches average.

Fifteenmile and Mill Creeks will probably see a beginning of regulation soon after July 4th. Mill Creek should hold up better than other small streams since it has many springs contributing to its flow.

White River at Tygh Valley is forecast to discharge 142,000 acre feet April through September or 92 percent of the average flow of 155,000 acre feet. About 128,000 acre feet of this flow will come in the April-July period.

Clear Creek and Frog Creek will produce less water than last year with late season shortages expected for recent water rights.

Rock, Gate and Badger Creeks will also have a reduced discharge this year with shortages coming earlier than usual, but the reservoirs in this area should fill if properly managed.

The grain lands of Wasco County were reported to be well saturated with adequate moisture available for cropping.

Central Oregon

Adequate snow at moderate and higher elevations but with nearly a complete absence at low elevations will provide adequate water supplies for Deschutes and Madras areas with short supplies indicated in the main Crooked River area in 1953.

The Little Deschutes River near Lapine is forecast to discharge 84,000 acre feet or 99 percent of average during the six months of the irrigation season. Of this total amount, 77,000 acre feet should come in the next four months. A strong flow in this stream means a good water season for the Lone Pine area.

Flow of Crescent Creek at Crescent Lake should total 23,400 acre feet or 123 percent of the 19,000 average for April-September. Flow of this stream has not been lower than this since 1947 when 19,800 acre feet were measured.

Crescent Lake Reservoir is now holding 52,000 acre feet compared with 47,300 last year and a ten year average of 40,600 acre feet. Capacity of this Reservoir is limited by agreement to about 55,000 acre feet.

Odell Creek near Crescent is forecast to flow 33,100 acre feet compared with 36,000 in 1951 and a 29,000 average.

Davis Lake above Wickiup reservoir continues at a high enough level to prevent any use of the forest road around the northwest side and reports indicate that the historically high stage of 21 feet may have been equalled or surpassed last summer. Lake level should continue high this year, although it is likely that it will not reach the high stage of last year.

Flow of the main Deschutes River below Snow Creek if forecast at 67,000 acre feet or 116 percent of average. The 1950 flow was 79,400 acre feet while 1947 brought 64,500 acre feet.

Inflow to Crane Prairie Reservoir during the April-September period is forecast at 129,000 acre feet or 111 percent of the ten year average, 1941-1950. Inflow in 1947 was 123,400 acre feet. Water stored in this Reservoir at this date is 50,700 acre feet compared with 47,100 acre feet last year and 37,100 acre feet average for ten years. Capacity of the Reservoir is limited to about 55,000 acre feet of water.

Wickiup Reservoir which stores water for the North Unit lands near Madras has been reported to be full with 198,000 acre feet on hand compared to 177,000 held in storage last year. This is an adequate supply for the North Unit.

The Deschutes River at Pringle Falls is forecast to discharge 287,000 acre feet in the next six months compared with 330,300 in 1950 and 263,900 average. The April-July period should bring 176,000 acre feet.

Total flow of the Deschutes River at Benham Falls for the April-September period is forecast at 518,000 acre feet or 108 percent of the average flow of 480,400 acre feet. The 1948 flow was 511,000 acre feet for this period.

Tumalo Creek and the Columbia Southern Canal are forecast to discharge 52,500 acre feet April through September compared with 60,400 acre feet in 1950. The ten year average flow is 48,000 acre feet. This is a satisfactory water supply.

Squaw Creek near Sisters is expected to discharge 55,200 acre feet in six months compared with 60,500 in 1950 and the 10-year average of 48,500 acre feet. The Plainview Ditch should have water up until July.

Snow cover on the Crooked River watershed is above normal at the highest elevations but is completely lacking at the lower elevations which normally produce the major portion of local streamflow.

The April-September flow of Crooked River near Post is forecast at 65,000 acre feet or 53 percent of the ten year average of 121,900.

The 1951 flow was 128,000 acre feet. Regulation of water will probably begin in early July and late water rights will definitely be short.

The Ochoco Creek area will also find water short by early July in the area above the Reservoir. Inflow to Ochoco Reservoir is forecast at only 20,000 acre feet compared to an average inflow of 30,000 acre feet. The heavy January rains and snow melt in February brought the storage figure up to the full mark of 46,900 acre feet by March 30. Water available for users served from the Reservoir is sufficient for this year.

The Hay Creek and Trout Creek areas of Jefferson County will have sufficient water for one early irrigation only. Snow is practically absent from these watersheds.

Harney Basin

Short water supplies are indicated in this basin with snow cover normal or nearly normal at high elevations but lacking at the lower elevations. The north end of the basin is in better shape than the southern end. Only one irrigation will be possible in most areas.

Silver Creek west of Burns has already reached its peak flow for the year so it is expected that a portion of the lands in the Warmspring area of the lower reaches of the Creek will have little or no water.

The flow of Silvies River near Burns is forecast at 70,000 acre feet or 71 percent of the 10-year average of 97,700 acre feet. The 1951 flow was 116,400 and in 1950 it was measured at 83,800 acre feet. There should be sufficient water for the usual irrigation flooding.

The small creeks west of Burns, Rattlesnake, Soldier, Coffee Pot, Cow and Rock, are all coming out earlier than usual. Most irrigation is already done in this area but all lands should get some water.

The southern end of the basin is expected to have short supplies except in Diamond Valley served by Kiger Creek where the situation is fair.

The flow of the Donner und Blitzen near Frenchglen is forecast at 50,000 acre feet for the April-September period compared with 65,000 acre feet average.

Trout Creek near Denio will probably not produce more than 6,000 acre feet compared with an 8,500 average and 6,000 received in 1950. This will be a short water supply.

All creeks in the Catlow Valley region are short and head at low elevations and hence will provide only meager water supplies for this season.

It is expected that water shortages may reduce the total wild-hay crop of the basin by as much as 20 percent unless unusually good rains are received. Present range conditions are poor due to drying winds and subnormal temperatures.

John Day Basin

Although mountain snow cover is missing at lower elevations due to warm temperatures and mid-winter rains, high elevation snow is normal or above in water content. Discharge is expected to be somewhat below normal in the larger streams but short enough to "hurt" only in the case of short, low-elevation streams like Damon, Riley and Field.

Flow of the main John Day at Prairie City combined with the power canal is forecast at 47,000 acre feet or 89 percent of the ten year average of 52,900. Flow in 1951 was 44,300 acre feet. Nothing like last year's high water is expected this year. Sufficient water for all needs is in sight, but there will be none to waste.

Strawberry Creek near Prairie City is forecast to discharge 7,000 acre feet in the next six months or 83 percent of the ten year average of 8,400. This stream flowed 7,900 acre feet in 1951.

Middle Fork of the John Day at Ritter should discharge 112,000 acre feet April through September compared with 115,400 in 1951 and an average of 127,400 acre feet. The 1950 discharge was 125,800 acre feet.

North Fork of John Day at Dale will discharge 230,000 acre feet or 88 percent of average between April 1 and September 30. The ten year average is 261,100 and the flow in 1951 was 255,800 acre feet. Camas Creek, a large tributary, should produce somewhat less water than average this year but no serious shortage of water is expected.

Umatilla--Walla Walla Basin

Although mountain snow cover in this basin is normal or better in water content at the high and moderate elevations, streamflow is expected to fall below normal because of the lack of low elevation snow, much of which has already melted and run off in mid-winter floods.

Flow of the Walla Walla River, South Fork near Milton, is forecast at 60,000 acre feet for the April-September period or 83 percent of the 1941-50 ten year average. Flows in the same period in 1950 were 88,300 and in 1951, 73,500 acre feet. This expected discharge is higher than indicated by the snow cover alone because of the large reserves of ground water in the basin. Water content of the snow at Tollgate is 30.0 inches compared with 35.6 inches last year at this date. Water supplies will be short in the early season for some late water rights served from the Hudson Bay and Pleasant View Canals.

On the Umatilla watershed, water content of the snow is only 95 percent normal on the combined snow courses at Tollgate, Emigrant Spring and Meacham. Even at Emigrant Spring, which is at elevation 3925 feet, the water content is only 44 percent average, and the large area below that elevation is almost entirely without any snow cover.

Flow of the Umatilla River near Gibbon above Meacham Creek for the irrigation season of 1953 is forecast at 55,000 acre feet compared with the ten year average of 92,900 acre feet. In 1951, the discharge was measured at 77,200 acre feet for the same period.

Discharge of the Umatilla at Pendleton is forecast at 110,000 acre feet for the April-September period compared with 138,000 acre feet in 1951 and the ten year average of 182,500 acre feet. Although this flow this year will probably be only 60 percent of average, downstream storage is in good shape and little water shortage should be experienced except on the late water rights. The April-July flow of the main river is forecast at 107,000 acre feet.

Cold Springs Reservoir now has 44,500 acre feet in storage with about 6,000 acre feet to go to fill. With reasonable natural flow in the Umatilla River, it will be possible to fill this Reservoir. Water is already being delivered to some water users in the Hermiston area.

The discharge of McKay Creek above McKay Reservoir is expected to be 20,000 acre feet in the next six months or 63 percent of average. The yield in 1951 was 17,500 acre feet and in 1950 it was 39,900 acre feet. All but a few hundred acre feet will flow into the Reservoir in the first four months through July.

McKay Reservoir has 66,500 acre feet in storage and needs only about 7,000 acre feet to fill. Unless heavy early withdrawal is required, this Reservoir could fill. Adequate water supplies should be available from this Reservoir this year.

Birch, Butter and Willow Creeks should have a satisfactory flow of water this irrigation season with the snow cover at Lucky Strike and Arbuckle Mountain Snow Courses now measuring 153 percent of average. Both stations have heavier water content than last year, averaging 31 percent greater than one year ago. In fact, water content at Lucky Strike is a new record this year with 19.5 inches recorded while the 17.1 inches measured at Arbuckle Mountain has been surpassed only in 1933 and 1937 with 17.7 and 17.2 inches, respectively.

Northeastern Oregon

The mountain snow cover in Northeastern Oregon is generally well above normal in water content in the Wallowa Mountains with a normal to below normal situation in the Blue Mountains where low elevation snow is definitely lacking. Consequently, the streamflow varies according to whichever mountain source forms the streams' headwaters.

The Imnaha River at Imnaha has an excellent snow cover and this stream is forecast to discharge 350,000 acre feet April-September or 115 percent of the ten year average, 1941-1950. The 1951 discharge was 267,500 acre feet, and in 1950 a total of 287,700 acre feet was measured in the same six months. Ample water will be available for the usual irrigations from this source.

Snow cover in the Wallowa watersheds contains 29 percent more water than average and should produce ample water supplies for the Wallowa Valley.

Wallowa River, East Fork, is forecast to discharge 13,800 acre feet or 122 percent of the ten year average in the six months April through September. 1951 brought 9,800 acre feet and 1950 brought a total of 10,800 acre feet for this same period.

Storage of water in Wallowa Lake now totals 27,800 acre feet compared with 11,400 a year ago and the ten year average of 20,600 acre feet. This is a good supply.

Discharge of Hurricane Creek near Joseph is forecast to be 54,000 acre feet or 117 percent of the average of 46,200 acre feet. 1951 brought 41,000 for the same period. Last year's flow was very heavy in all Wallowa streams, but data is not yet available on those discharges.

April-September flow of Lostine River near Lostine is forecast for 152,000 acre feet or 119 percent of average. The 1951 flow was 110,000 acre feet for the same months.

Although Bear Creek near Wallowa heads in a much lower watershed, it is forecast to discharge 122 percent of average or 89,000 acre feet. Average is 73,200 acre feet, and 1951 brought only 56,500 acre feet.

Water content of the snow cover on the Catherine Creek watershed is well above average and will produce a well-sustained streamflow this season. Since the snow is well consolidated this year, no flash floods from snow melt are to be expected. Flooding would be likely only if above normal rainfall were to occur, coupled with abnormal melting conditions. At Moss Spring, the water content of the snow is 27.2 inches compared with 28.1 last year and an average of 24.7 inches.

Discharge of Catherine Creek near Union is forecast at 82,000 acre feet or 114 percent average for the April-September season. Discharge in 1951 was 62,700 acre feet.

Streamflow of the Grande Ronde River at La Grande in the period April through September is forecast at 140,000 acre feet or 71 percent of the ten year average of 199,200 acre feet. In 1951, the discharge was 165,100 acre feet for the same period. Lack of low elevation snow will keep the flow of this stream below normal. There will be some late season shortages of water for some lands served from this source.

Eagle and Pine Creeks on the south side of the Wallowa Mountains should have above normal water supplies, but not equal to those of last year since water content of the snow at Schneider Meadows is 39.3 inches compared to 45.4 inches last year and 29.1 inches average for the ten years, 1941-1950.

Wolf Creek, Ladd Creek and other small streams are expected to have enough water for one irrigation only this year.

North Powder River heads in the Anthony Lakes area and should produce about the same amount of water as last year, although lack of low elevation snow could reduce the total amount available this year. There should be sufficient supply for one good irrigation.

Discharge of the Powder River at Salisbury is forecast at 58,000 acre feet or 90 percent of the ten year average. This will be less than received in 1951 when nearly 70,000 acre feet were measured for the six months. All but 1,000 acre feet of this flow should be received by the end of July and there should be a sufficient water supply for most average needs with late season deficiencies occurring only for late water rights.

Snow cover at moderate and high elevations of the Burnt River watershed is better than average but below 5000 foot is very short or completely melted. Discharge of the Burnt River near Hereford (with corrections for storage in Unity Reservoir) will therefore be only about 70 percent average or 31,000 acre foot. Some late shortages will occur on the North Fork, but flow will be satisfactory for most uses on the South Fork.

Unity Reservoir, with a capacity of 25,000 acre foot, is reported to be holding about 15,000 acre foot of water which is about average for this date. There should be adequate water for all lands served from this Reservoir.

Southeastern Oregon

Snow cover on the Malheur and Owyhee River watersheds is conspicuously absent in the lower elevations but is about 75 percent average on moderate to high elevations of the Owyhee and 124 percent average on the Malheur.

Flow of the Malheur River near Drewsey for the six months, April through September, is forecast at 70,000 acre feet or 92 percent of the ten year average. Flow in 1951 totalled 72,300 and in 1950, 63,300 acre foot.

Storage in Warmsprings Reservoir has already reached 167,000 acre feet compared with 97,900 acre feet at this date last year. Capacity is 191,000 acre foot, and the Reservoir will fill unless early withdrawals are heavier than expected. Lands served from this water source will have adequate supplies.

The April-September discharge of Malheur River, North Fork at Boulah, is forecast at 58,000 acre feet or 93 percent of average. The 1951 discharge was 54,400 acre foot.

Agency Valley Reservoir, with a capacity of 60,000 acre foot, has collected a total of 47,000 acre feet compared with the ten year average of 50,500 acre foot. This Reservoir should fill if runoff conditions are about normal. This is an adequate water supply for 1953. Some holdover, possibly as much as 100,000 acre foot, should be available for 1954 if runoff conditions are about average.

The Bully Creek watershed has already had a good runoff, and there should be satisfactory water supplies for most of this area, although there will be less water than last year.

Storage in Willow Creek Reservoir No. 3 is reported to be about 15,000 acre foot with adequate supplies in sight for usual irrigation needs.

The huge Owyhee watershed, with a total of 11,160 square miles of drainage area, has no low-level snow, and the moderate to high levels have only 75 percent of the average snow.

The Owyhee Project can expect an inflow to Owyhee Reservoir of about 330,000 acre foot in the April-September period. This inflow will be 82 percent of the 10-year average, 1941-50. The April-July period should

bring 320,000 acre feet. Last year's astounding inflow for the April-July period was 1,434,800 acre feet. Adequate water is available for all lands to be served this year from the Owyhee source. The huge Reservoir contains 574,400 acre feet of irrigation water.

Jordan Valley lands served from Antelope Reservoir should have sufficient water although the Reservoir contains only 19,300 acre feet of water. Water content of snow at South Mountain and Silver City is 85 and 117 percent average, respectively.

Discharge of McDermitt and Tenmile Creeks in Upper Quinn River will fall far short of last year and will see considerable late season deficiencies.

Southcentral Oregon

1953 water supplies in Lake County will likely be good in the south and west portions of the County and generally fair elsewhere except in Guano Valley where a deficient supply is anticipated. Water content of the snow is 112 percent average in Goose Lake area, 145 percent in the Chewaucan, 107 in Warner Valley and only 12 percent average in Guano Valley. The Silver Creek Snow Course in Silver Lake Basin has no snow at this time.

Lands in Silver Lake Valley should have satisfactory water supplies this year with Thompson Valley Reservoir now storing about 15,000 acre feet and three feet of snow in the vicinity of the dam. Soil moisture is excellent.

Conditions in Christmas Lake and Benjamin Lake areas are reported to be less favorable with little surface water to be found although soils are reportedly well wetted.

Summer Lake Basin is very wet and runoff is above normal with the outlook for the rest of the season satisfactory. As in other parts of Lake County, warmer temperatures would be of real help at this time. Summer Rim Snow Course at 7200 feet elevation has a water content of 22.8 inches compared with the ten year average of 16.0 inches and last year's water content of 35.5 inches.

Discharge of the Chewaucan River near Paisley is forecast at 68,000 acre feet for the April-June period. This is 106 percent of the ten year average of 64,400 acre feet. Flow during the six months has totalled above normal and summer flow should provide adequate water supplies.

Abert Lake is higher than for many previous years with the gage reading slightly above 5.0 feet compared with 1.7 feet in 1951 and about 2.0 feet last year at this date. Water is now edging into the sagebrush along the east shore and rising continuously. Some water from the Chewaucan River has been reaching the Lake this spring season.

Willow and Crooked Creeks have already made good runs and should furnish nearly normal amounts of irrigation water. Low elevation snow is now gone.

Lands in Gooso Lako Basin aro woll saturatod and oarly runoff is woll underway with tho outlook for staisfactory wator supplios in all aroas.

Thomas and Cottonwood Crooks in tho north ond of tho Basin aro alroady running largo amounts of wator and should produco bottor than avorago flows. Tho small Cottonwood Rosorvoir has 1,900 acro foot in storago as of April 1st.

Crano Crook, Dry Crook and othor small crooks of tho lowor valloy will probably havo avorago flows but should hold up bottor than usual bocauso of good soil moisturo.

Lands sorvod from Drow Crook and Drow Rosorvoir will havo adoquato wator supplios with prosont storago roportod at 54,000 acro foot and inflow for tho noxt six months forocast at 26,000 acro foot or about avorago for tho ton yoar poriod, 1941-1950.

Wator supplios for Warnor Valloy lands will bo adoquato this yoar with flow of Doop Crook abovo Adol forocast at 66,000 acro foot for tho April-June poriod. Tho 1951 dischargo was 71,900 acro foot for this samo poriod. Honoy and Twontymilo Crooks will probably havo avorago runoff this yoar. Wator has alroady roachod Bluojoint Lako this yoar duo, in tho main, to high winds.

Tho Hart Mountain Rofugo has vory littlo snow this yoar and wator supplios will bo doficiont in lato soason. Flow of Rock Crook will bo greatly roducod.

Guano Valloy lands havo no snow and will bo oxtromoly short of wator this yoar.

Southorn Orogon

Satisfactory to abundant wator supplios aro oxpoctod this yoar for Klamath, Jackson, Josophino and Douglas Countios. Mountain snow covor is woll abovo avorago in wator contont and both crop-land and high mountain soils aro vory wot. Rosorvoir storago is oxcollont.

Spraguo River noar Chiloquin is forocast to flow 292,000 acro foot or 133 porcont of avorago for tho April-Soptombor poriod. Tho 1951 flow was 282,200 acro foot for tho samo poriod. All valloy lands aro woll wottod at this timo and tho outlook is for oxcollont wator supplios.

Tho Williamson River bolow tho Spraguo is forocast at 456,000 acro foot or 126 porcont avorago. Avorago flow is 361,500 acro foot. This stroam is tho main foodor to Uppor Klamath Lako.

Not inflow to Uppor Klamath Lako is forocast at 620,000 acro foot or 134 porcont avorago. Tho first four months, April through July, should bring 510,000 acro foot. Adoquato wator supplios for all usos is assurod from this sourco of supply. Tho oxtromoly hoavy 1952 flow was moasurod at 1,151,200 acro foot for tho six months, April through Soptombor.

Although high snow cover on both Clear Lake and Gerber Reservoir watersheds is about average, the low-elevation snow is completely absent and inflow for the next six months will be below average.

Gerber Reservoir has 77,100 acre feet in storage and is spilling some to make room for 13,000 acre feet forecast to come in the next six months. Ten year average inflow for this period is 18,100 acre feet. The Reservoir will provide adequate water for 1953.

Clear Lake Reservoir contains 280,600 acre feet on April 1 and is forecast to receive 23,000 acre feet in the next six months compared with the ten year average inflow of 39,600 acre feet. Adequate water is available in this Reservoir.

Smaller reservoirs and stock ponds in Klamath County are reported full or in satisfactory condition.

Water supply outlook in the Rogue River Basin is very good with water content of mountain snow cover now 125 percent of average.

Discharge of Rogue River above Prospect is forecast at 391,000 acre feet or 128 percent of the 10-year average. 355,000 acre feet of this should come in the first four months, April through July. The 1952 flow for April-September was 477,000 acre feet.

Middle Fork of Rogue River near Prospect is forecast to discharge 85,000 acre feet or 115 percent of the ten year average for the six months April-September. The next four months should bring 68,000 acre feet.

South Fork Rogue River near Prospect is forecast to discharge 83,000 acre feet April through September. This discharge will be 111 percent average.

Discharge of the Main Rogue River below South Fork for the next six months is forecast at 790,000 acre feet or 120 percent average. The April-July period should bring 690,000 acre feet.

Flow of the Rogue River at Raygold is forecast at 1,190,000 acre feet which is 124 percent of average for the six months, April-September.

Discharge of Rogue River at Grants Pass for the April-September period is forecast at 1,050,000 acre feet or 120 percent average. The 10-year average flow, 1941-50, is 857,800 acre feet.

Grants Pass Irrigation District will have adequate water supplies with little or no possibility of streamflow falling so low that alternation of pumping will be necessary.

Irrigated lands of Bear Creek Valley should have adequate water supplies this year with water content of snow cover averaging 115 percent of average.

Talent Irrigation District begins this irrigation season with storage in Hyatt Prairie Reservoir 13,200 acre feet on April 1. Capacity is only 16,100 acre feet. Inflow to Hyatt Lake is forecast at 6,100 acre feet or 105 percent average. Some of this water will come too

early for use or storage and so will be lost down Keene Creek. Emigrant Reservoir is full with 8,300 acre feet ready to use. The total amount of water available for use by the Talent District is adequate.

McDonald Creek Canal should continue to deliver water up to about August 1.

The Medford and Rogue River Valley Irrigation Districts have adequate water supplies in sight for the 1953 season.

Fourmile Lake Reservoir storage as of April 1 is 14,700 acre feet and capacity is 16,100. Inflow for the next six months is forecast at 7,800 acre feet or 100 percent average.

Fish Lake Reservoir storage is 6,800 acre feet and capacity is 7,800. Inflow to this Reservoir is represented by flow of Little Butte Creek, North Fork below Fish Lake, which is forecast at 14,300 acre feet for the next six months or 100 percent of average.

Eagle Point Irrigation District will have adequate water supplies as usual

The Applegate River near Ruch is forecast to discharge 150,000 acre feet compared with the ten year average of 114,800 acre feet. This will be a satisfactory supply for the usual irrigations.

Snow cover on the Illinois River watersheds is about 114 percent average and flow of the Illinois at Kerby is forecast at 208,000 acre feet, April through September, or 112 percent of the ten year average of 185,800 acre feet. This should mean satisfactory water supplies in this area.

Deer Creek and Sucker Creek will have about average flows. Water content of snow at Althouse, however, is only 5.8 inches compared with 24.3 inches last year and an average of 7.8 inches.

Evans Creek, Grave Creek and Jump-Off-Joe should have good water supplies but flows will not be greater than average.

Snow cover on the Umpqua River Basin is 131 percent of average.

Flow of Clearwater River above Trap Creek is forecast at 78,000 acre foot or 126 percent of average for April-September.

North Umpqua River below Lake Creek is forecast to discharge 210,000 acre feet compared with the ten year average of 160,500 acre feet.

North Umpqua at Tokatee Falls is forecast to flow 470,000 acre feet or 126 percent of the ten year average of 372,900 acre feet.

Willamette Valley Streams

Snow cover in the Willamette watershed varies from 85 percent average on the Clackamas to 115 percent on the Middle Fork of the Willamette.

Streamflow for the next six months will probably be 95 to 109 percent of the 1941-1950 average.

Flow of Clackamas River at Big Bottom is forecast at 162,000 acre foot for April through September or 99 percent of average. The discharge for the same stream near Cazadero is forecast at 760,000 acre feet or 95 percent of average.

April-September flow of the McKenzie River at McKenzie Bridge is forecast at 612,000 acre foot or 109 percent of the ten year average of 562,000 acre foot. Flow of this stream at the Vida station is forecast at 1,312,000 acre foot or 108 percent average for the next six months.

Flow of the Middle Fork of the Willamette at Lowell is forecast at 936,000 acre foot for the six months compared with an average of 855,000 acre foot. This flow will be 109 percent of the 1941-50 average.

Storage in multiple-purpose reservoirs in Willamette Valley is average and will furnish adequate supplies for lands served from these sources.

ERRATA

Forecasts for the Owyhee reservoir inflow were incorrectly listed on page 16 of the narrative. Forecasts should be as follows:

Owyhee Reservoir inflow for April-July - 260,000 acre feet; 68 percent average.
April-September - 270,000 acre feet; 67 percent average.

OREGON SNOW SURVEYS - ABOUT APRIL 1, 1953

DRAINAGE BASIN and SNOW COURSE	Number or State	Elev.	SNOW COVER MEASUREMENTS: Date of Survey	Snow Depth (In.)	Water Content (In.) 1953	Same Approx. Date 1952	Same Approx. Date 1951	Past Record: Yrs. of Rcd.	Past Record: Avg. Water Cont. (In.)
UPPER COLUMBIA DRAINAGE									
LOWER SNAKE IN OREGON									
OWYHEE RIVER									
*Fish Creek	952	7900	3/28	65.1	22.1	43.2	32.8	13	26.1
*Boar Creek	Nev.1	7800	3/22	59.1	19.9[a]	33.1	22.8	10	21.8
*Granite Peak	Nev.4	7800	4/1	27.4	9.5	--	11.0	12	11.6
Upper Jack Creek	Nev.10	7250	3/30	30.1	11.4[a]	20.8	10.4	12	11.4
*Midas	Nev.6	7200	4/1	0.0	0.0[a]	--	0.0	11	2.1
*Upper Buckskin	Nev.2	7200	3/31	12.5	5.1	--	8.8	16	10.7
*76 Creek	Nev.4	7100	3/25	41.5	15.5[a]	--	--	4	12.5
*Silvies	951	6900	3/28	27.3	10.0	26.5	15.8	15	14.6
*Fox Creek	Nev.2	6800	3/22	26.5	8.4[a]	19.5	7.9	16	9.8
Lower Jack Creek	Nev.9	6800	3/30	0.0	0.0[a]	10.3	0.5	18	4.2
Rodeo Flat	Nev.8	6800	3/26	24.4	9.8[a]	22.8	9.2	12	11.1
Big Bend	Nev.6	6700	3/26	26.9	9.7[a]	19.1	12.5	25	10.0
Fry Canyon	Nev.7	6700	3/26	25.1	9.6[a]	20.3	10.2	12	10.2
*Lower Buckskin	Nev.1	6700	3/31	4.9	2.1	--	10.8	11	8.7
*Martin Creek	Nev.3	6700	4/1	11.4	4.4	--	6.1	11	8.2
Gold Creek	Nev.5	6600	3/26	15.1	5.9[a]	12.6	7.6	13	6.9
*Disaster Peak	Nev.6	6500	3/30	24.8	10.1	36.2	10.9	4	17.2
Silver City	Idaho12	6400	3/29	43.0	17.5	31.5	17.2	8	15.0
South Mtn. #2	Idaho13	6340	3/31	27.0	9.8[a]	--	10.4	12	11.5
Taylor Canyon	Nev.12	6200	3/30	0.0	0.0[a]	15.4	0.0	12	4.2
*Tremewan Ranch	Nev.11	5700	3/30	0.0	0.0[a]	11.8	0.0	11	1.1
MALHEUR RIVER									
*Barney Creek	143	5950	3/30	25.5	8.8	13.0	7.3	8	9.4
Blue Mtn. Springs	133	5900	3/28	49.0	18.8	23.1	17.5	23	15.2
Crane Prairie	137	5375	3/29	28.9	11.7	16.1	10.8	15	8.8
Lake Creek	136	5120	3/30	34.7	14.1	15.9	13.5	15	10.1
Rock Spring	134	5100	3/30	13.7	5.3	9.1	5.5	17	4.9
Stinking Water	135	4800	3/31[b]	0.0	0.0	9.2	0.0	12	1.3
BURNT RIVER									
Barney Creek	143	5950	3/30	25.5	8.8	13.0	7.3	8	9.4
Dooley Mountain	156	5430	3/30	29.9	11.6	14.8	10.2	14	9.1
*Gold Center	249	5340	3/28	43.4	15.5	17.7	14.4	14	11.9
Tipton	142	5100	3/31	34.5	11.3	13.0	--	18	9.8
Blue Mtn. Summit	141	5098	3/30	28.5	10.0	13.2	9.2	18	7.7
POWDER RIVER									
Anthony Lake	155	7125	3/30	86.7	30.7	31.5	28.1	17	27.8
Goodrich Lake	157	6775	Report Delayed			51.0	42.0	5	41.4
Summit Springs	184	6000	4/1	66.8	18.2	24.2	21.7	16	21.6

*Not located directly on this drainage area.
[a]Telegraphic
[b]Date estimated

OREGON SNOW SURVEYS - ABOUT APRIL 1, 1953

DRAINAGE BASIN and SNOW COURSE	Number or State	Elev.	SNOW COVER MEASUREMENTS: Date of Survey	Snow Depth (In.)	Water Content (In.): 1953	Same Approx. Date: 1952	Same Approx. Date: 1951	Past Record: Yrs. of Rcd.	Past Record: Avg. Water Cont. (In.)
POWDER RIVER -(Cont'd)									
Bourne	154	5800	3/29	58.7	20.6	20.1	18.5	17	15.8
Taylor Green	185	5740	3/29	56.0	20.5	24.4	17.1	15	16.8
Dooley Mountain	156	5430	3/30	29.9	11.6	14.8	10.2	14	9.1
Eilertson Meadows	151B	5400	3/29	37.5	15.4	17.0	14.5	15	11.9
*Gold Center	249	5340	3/28	43.4	15.5	17.7	14.4	14	11.9
PINE CREEK									
Schneider Meadows	161	5400	3/30	97.6	39.3	45.4	30.8	15	29.9
IMNAHA RIVER									
*Aneroid Lake No. 1	183	7480	3/28	108.1[a]	48.0[a]	45.7	42.3	18	36.2
*Aneroid Lake No. 2	183A	7000	3/28	82.2	36.1	37.5	31.9	11	30.1
Coverdale	171	4250	Not Measured			--	--	4	9.6
GRANDE RONDE RIVER									
Aneroid Lake No. 1	183	7480	3/28	108.1[a]	48.0[a]	45.7	42.3	18	36.2
Anthony Lake	155	7125	3/30	86.7	30.7	31.5	28.1	17	27.8
Aneroid Lake No. 2	183A	7000	3/28	82.2	36.1	37.5	31.9	11	30.1
Summit Springs	184	6000	4/1	66.8	18.2	24.2	21.7	16	21.6
Camp Carson	187	5970	3/30	31.9	11.1	--	10.6	13	10.1
Moss Spring	186A	5850	3/28	72.6	27.2	28.1	22.6	15	25.1
Taylor Green	185	5740	3/29	56.0	20.5	24.4	17.1	15	16.8
Beaver Reservoir	188	5340	3/28	41.6	12.9	12.8	13.3	14	12.0
Tollgate	212	5070	3/31	79.0	30.0	35.6	28.7	22	27.8
*Lucky Strike	223	5050	3/30	57.4	19.5	13.6	16.2	14	13.1
Schoolmarm	248	4775	3/31	12.6	4.6	5.6	5.0	6	3.6
Meacham	221	4300	3/30	24.6	8.9	9.9	8.2	24	8.4
LOWER COLUMBIA DRAINAGE									
UMATILLA RIVER									
Arbuckle Mountain	241	5400	3/31	42.1	17.1	14.4	12.9	24	10.6
Tollgate	212	5070	3/31	79.0	30.0	35.6	28.7	22	27.8
Lucky Strike	223	5050	3/30	57.4	19.5	13.6	16.2	14	13.1
Meacham	221	4300	3/31	24.6	8.9	9.9	8.2	24	8.4
Emigrant Springs	222	3925	3/31	8.7	2.8	6.7	4.8	24	5.8
WILLOW CREEK									
Arbuckle Mountain	241	5400	3/31	42.1	17.1	14.4	12.9	24	10.6
WALLA WALLA RIVER									
Tollgate	212	5070	3/31	79.0	30.0	35.6	28.7	22	27.8

*Not located directly on this drainage area.
[a]Partly estimated.

OREGON SNOW SURVEYS - ABOUT APRIL 1, 1953

DRAINAGE BASIN and SNOW COURSE	Number or State	Elev.	SNOW COVER MEASUREMENTS Date of Survey	Snow Depth (In.)	Water Content (In.) 1953	Same Approx. Date 1952	Same Approx. Date 1951	Past Record Yrs. of Rcd.	Past Record Avg. Water Cont. (In.)
JOHN DAY RIVER									
*Anthony Lake	155	7125	3/30	86.7	30.7	31.5	28.1	17	27.8
Dixie Springs	244	6650	3/30	80.0	28.3	31.8	25.1	17	23.8
*Snow Mountain	965	6300	3/27	47.1	16.2	21.5	16.2	9	15.1
Olive Lake	245	6000	3/30	69.3	23.5	27.7	20.3	17	19.8
Blue Mtn. Springs	133	5900	3/28	49.0	18.8	23.1	17.5	23	15.2
Arbuckle Mountain	241	5400	3/31	42.1	17.1	14.4	12.9	24	10.6
Gold Center	249	5340	3/28	43.4	15.5	17.7	14.4	14	11.9
*Izee Summit	964	5293	3/30	25.7	8.7	13.8	9.9	17	7.7
Starr Ridge	247B	5156	3/30	16.1	5.4	10.5	5.5	17	4.7
Tipton	142	5100	3/31	34.5	11.3	13.0	--	18	9.8
Blue Mtn. Summit	141	5098	3/30	28.5	10.0	13.2	9.2	18	7.7
*Lucky Strike	223	5050	3/30	57.4	19.5	13.6	16.2	14	13.1
Beech Creek Summit	246A	4800	3/30	18.3	6.8	7.4	4.2	16	5.0
Schoolmarm	248	4775	3/31	12.6	4.6	5.6	5.0	6	3.6
CROOKED RIVER									
*Snow Mountain	965	6300	3/27	47.1	16.2	21.5	16.2	9	15.1
Dorr	343	5670	3/31[a]	36.8	12.8[b]	15.1	10.9	16	10.6
Ochoco Meadows	341	5200	3/28	35.8	12.2	17.5	12.8	24	9.6
Marks Creek	344	4540	3/31[a]	1.9	0.7[b]	6.9	3.3	15	3.2
DESCHUTES RIVER									
New Dutchman Flat	324A	6400	3/26	146.9	64.8	77.1	68.6	16	51.9
Windigo Pass	744	5800	3/24	143.2	53.8	62.3	56.1	5	55.2
Charlton Lake	327	5750	4/2	89.7	34.7	49.6	--	12	28.1
Three Creek Meadows	331	5600	3/25	59.1	22.6	30.5	33.4	24	20.7
Willamette Pass	323	5600	3/24	134.9	50.0	64.6	49.0	6	48.5
Irish-Taylor	329	5500	4/2	107.7	46.9	64.0	45.0	3	55.3
*Waldo Lake	521A	5500	4/2	83.8	34.5	50.1	40.6	14	29.3
Tangent	**	5400	3/26	67.4	27.6	37.0	--	1	37.0
Cascade Summit	321	4880	3/29	85.1	34.8	54.5	40.6	23	31.6
New Crescent Lake	325A	4800	3/23	55.7	20.3	26.6	--	1	26.6
*Chemult	834	4760	3/31	34.4	16.3	21.4	11.0	15	9.5
Crescent Lake	325	4760	3/23	40.2	14.5	25.7	24.8	18	10.3
Hogg Pass	351	4755	3/28	123.9	49.8	60.8	55.4	14	43.8
Black Pine Spg.	**	4600	3/25	4.1	1.2	9.5	--	1	9.5
Caldwell Ranch	326	4400	4/1	31.4	14.7	18.2	13.8	15	8.7
Hungry Flat	**	4400	3/26	7.3	3.1	--	--	0	--
*Brooks Meadows	431	4300	3/25	29.2	10.5	17.2	15.4	20	11.4
Clear Lake	361	3500	3/26	30.1	10.2	17.8	18.4	21	14.3

*Not located directly on this drainage area.

**Auxiliary snow station - average of 3 to 5 samples - measurements taken at same point each survey.

[a] Date estimated.

[b] Telephonic.

OREGON SNOW SURVEYS - ABOUT APRIL 1, 1953

DRAINAGE BASIN and SNOW COURSE	Number or State	Elev.	SNOW COVER MEASUREMENTS: Date of Survey	Snow Depth (In.)	Water Content (In.): 1953	Same Approx. Date: 1952	Same Approx. Date: 1951	Past Record: Yrs. of Rcd.	Past Record: Avg. Water Cont. (In.)
HOOD RIVER									
Tilly Jane-Mt.Hood	432	6000	3/22	122.2	44.4	--	58.0	5	55.0
Rod Hill	434	4400	3/29	95.3	41.9	59.3	56.2	5	66.3
Brooks Meadows	431	4300	3/25	29.2	10.5	17.2	15.4	20	11.4
Greenpoint Reservoir	433	3400	3/28	16.9	9.0	22.1	--	2	24.8
WILLAMETTE VALLEY STREAMS									
SANDY RIVER[1]									
Phlox Point-Mt.Hood	452	5600	3/26	155.2	71.6	76.2	79.7	15	61.9
Still Creek	451	3700	3/26	59.2	24.0	32.9	34.5	16	24.1
*Clear Lake	361	3500	3/26	30.1	10.2	17.8	18.4	21	14.3
CLACKAMAS RIVER									
*Clear Lake	361	3500	3/26	30.1	10.2	17.8	18.4	21	14.3
Peavine Ridge	591	3500	3/29	51.5	19.5	27.8	26.9	16	20.1
Clackamas Lake	592	3400	3/26	35.2	12.9	16.5	23.2	12	15.6
Big Bottom	***	2118.	3/29	6.5	2.6	11.0	11.9	2	11.4
Lake Harriet	***	2045	3/29	0.0	0.0	1.7	T	2	0.8
SANTIAM RIVERS									
Hogg Pass	351	4755	3/28	123.9	49.8	60.8	55.4	14	43.8
Santiam Junction	552	3990	3/28	69.3	29.6	43.2	31.2	12	25.3
Marion Forks	553	2730	3/28	35.3	14.5	24.7	19.0	12	13.6
Breitenbush	551	2325	Not Measured			9.7	8.9	9	4.5
Whitewater Bridge	***	2175	3/28	0.0	0.0	10.0	6.0	3	12.9
Detroit (new town)	***	1500+	3/28	0.0	0.0	0.0	0.0	2	0.0
Detroit Dam	***	1580	3/28	0.0	0.0	0.0	0.0	2	0.0
Mill City	***	826	3/28	0.0	0.0	0.0	0.0	2	0.0
Snow Line: about 2200 feet.									
McKENZIE RIVER									
McKenzie	531	4800	4/1	115.3	55.1	65.1[a]	51.5	12	41.6
Hogg Pass	351	4755	3/28	123.9	49.8	60.8	55.4	14	43.8
Santiam Junction	552	3990	3/28	69.3	29.6	43.2	31.2	12	25.3
Dead Horse Grade	***	3800	4/1	51.6	20.1	35.7	18.0	3	32.3
White Branch Slide	***	2800	4/1	0.0	0.0	15.0	T	3	10.0
Lost Creek Ranch	***	1956	4/1	0.0	0.0	--	0.0	1	0.0
McKenzie Bridge	***	1372	4/1	0.0	0.0	0.0	0.0	2	0.0
Vidae	***	800	4/1	0.0	0.0	0.0	0.0	2	0.0
Snow Line: 3000 feet.									

*Not located directly on this drainage area.

***Auxiliary snow station - average of 3 to 5 samples - measurements taken at same point each survey.

[a]Partially estimated.

[1]Not strictly a part of the Willamette Drainage; these surveys are indicative of west slope conditions.

OREGON SNOW SURVEYS - ABOUT APRIL 1, 1953

DRAINAGE BASIN and SNOW COURSE	Number or State	Elev.	SNOW COVER MEASUREMENTS: Date of Survey	Snow Depth (In.)	Water Content (In.): 1953	Same Approx. Date: 1952	Same Approx. Date: 1951	Past Record: Yrs. of Rcd.	Past Record: Avg. Water Cont. (In.)
MIDDLE FORK WILLAMETTE RIVER									
*Charlton Lake	327	5750	4/2	89.7	34.7	49.6	--	12	28.1
Willamette Pass	323	5600	3/24	134.9	50.0	64.6	49.0	6	48.5
Waldo Lake	521A	5500	4/2	83.8	34.5	50.1	40.6	14	29.3
Cascade Summit	321	4880	3/29	85.1	34.8	54.5	40.6	23	31.6
Champion	522	4500	3/31	75.8	31.9	59.2	29.8	14	28.7
Salt Creek Falls	**	4000	3/29	53.0	20.4	30.8	21.4	3	29.5
Railroad Overpass	**	2750	3/29	0.0	0.0	5.6	0.0	3	5.3
McCredie Spring	**	2120	3/29	0.0	0.0	0.0	0.0	3	0.0
Oakridge	**	1310	3/29	0.0	0.0	0.0	0.0	3	0.0
Meridian Dam	**	750	3/29	0.0	0.0	0.0	0.0	2	0.0
Snow Line: about 5000 feet.									
COAST FORK WILLAMETTE RIVER (Row River)									
Champion	522	4500	3/31	75.8	31.9	59.2	29.8	14	28.7
Golden Curry Creek	**	3136	3/31	15.6	5.4	20.6	7.7	3	15.4
Weaver Creek	**	2440	3/31	0.0	0.0	10.3	3.7	2	7.0
Lund Park	**	1740	3/31	0.0	0.0	0.0	0.0	3	0.0
Layng Creek R.S.	**	1200	3/31	0.0	0.0	0.0	0.0	3	0.0
Snow Line: 2700 feet.									
MARY'S PEAK									
Mary's Peak	541	3620	3/31	34.3	13.3	25.4[a]	--	12	11.6
OREGON COAST DRAINAGE									
UMPQUA RIVER									
Windigo Pass	744	5800	3/24	143.4	53.8	62.3	56.1	5	55.2
Diamond Lake	743	5315	3/27	77.2	32.5	40.7	27.7	24	19.9
Whaleback	7217	5140	3/28	110.3	42.8	58.1	33.3	15	35.6
Champion	522	4500	3/31	75.8	31.9	59.2	29.8	14	28.7
N.Umpqua nr.Lake Cr.	742	4215	3/28	50.4	20.3	27.7	20.6	15	13.3
Trap Creek	741	3800	Not Measured			24.0	19.4	13	11.8
ROGUE RIVER									
Wagner Butte	7213	6900	3/27	54.0	19.9	30.0	13.7	18	17.6
Seven Lakes No.1	7211	6800	4/2	156.4	70.2	--	72.4	6	56.9
Big Red Mountain	729	6500	3/31	99.3	42.8	50.1	22.3	17	29.3
Little Red Mountain	7210	6500	4/1	78.7	34.6	39.2	16.3	17	22.9
*Park Headquarters	838	6450	3/30	153.5	69.6	90.5	72.5	9	64.8
Scragg Mountain	7220	6200	4/4	78.9	39.5	62.3	30.4	11	29.3

*Not located directly on this drainage area.
**Auxiliary snow station - average of 3 to 5 samples - measurements taken at same point each survey.
[a]Telegraphic.

OREGON SNOW SURVEYS - ABOUT APRIL 1, 1953

DRAINAGE BASIN and SNOW COURSE	Number or State	Elev.	SNOW COVER MEASUREMENTS: Date of Survey	Snow Depth (In.)	Water Content (In.): 1953	Same Approx. Date: 1952	Same Approx. Date: 1951	Past Record: Yrs. of Rcd.	Past Record: Avg. Water Cont. (In.)
ROGUE RIVER -(Cont'd)									
Seven Lakes No.2	7212	6200	4/1	116.3	48.2	--	45.9	16	42.5
*Annie Spring	831	6018	3/30	128.9	56.5	77.3	58.5	19	45.1
*Fourmile Lake	7223	6000	3/25	71.9	32.4	--	--	0	--
Grayback Peak	727	6000	4/2	70.5	32.6[a]	50.5	18.7	17	26.0
Billie Cr. Divide	722	5300	3/26	65.9	24.6	--	21.0	22	22.3
Whaleback	7217	5140	3/28	110.3	42.8	58.1	33.3	15	35.6
Hobart Lake	7221	5010	3/30	14.4	6.2	9.3	1.5	5	6.3
*Hyatt Prairie Res.	723	4900	3/31	28.4	12.2	17.5	6.8	20	9.1
Fish Lake	725	4865	3/31	39.7	14.2	--	10.2	19	12.4
Siskiyou Summit	728	4630		b		17.7	1.0	18	4.0
Althouse	7216	4400	4/1	19.1	5.8	24.3	1.6	16	7.8
Silver Burn	7219	3720	4/1	39.0	16.9	26.6	14.0	16	11.4
South Fork Canal	7218	3500	3/31	0.0	0.0[a]	7.4	0.0	16	1.5
KLAMATH LAKE BASIN									
Summer Rim	841	7200	3/28	53.3	22.8	35.5	20.5	16	17.6
Seven Lakes No.1	7211	6800	4/2	156.4	70.2	--	72.4	6	56.9
Park Headquarters	838	6450	3/30	153.5	69.6	90.5	72.5	9	64.8
Seven Lakes No.2	7212	6200	4/1	116.3	48.2	--	45.9	16	42.5
Annie Spring	831	6018	3/30	128.9	56.5	77.3	58.5	20	44.0
Fourmile Lake	7223	6000	3/25	71.9	32.4	--	--	0	--
Strawberry	837	5600	4/3	15.7	6.8	18.2	6.6	12	6.7
*Quartz Mtn.(COPCO)		5504	No Report			12.9	--	21	4.9
Sun Mountain	836	5350	3/27	85.6	33.4	47.4	35.8	16	28.2
*Quartz Mountain	811	5320	4/2	13.0	6.2	12.9	3.3	22	4.5
Billie Creek Divide	722	5300	3/26	65.9	24.6	--	21.0	22	22.3
Crowder Flat	Calif.	5200	3/29	0.0	0.0	--	0.0	12	0.1
Taylor Butte	842	5100	3/31	14.0	6.7	14.4	2.2	16	3.9
Lake of the Woods	835	4960	3/31	40.9	15.6	21.5	8.9	16	10.1
Hyatt Prairie Res.	723	4900	3/31	28.4	12.2	17.5	6.8	20	9.1
Gerber	839	4850	3/22	12.0	1.5	4.0	--	2	2.0
Bly 101 Ranch (COPCO)		4800	3/31	0.0	0.0[c]	0.8	0.0	24	0.1
Chemult	834	4760	3/31	34.4	16.3	21.4	11.0	15	9.5
Yamsey (COPCO)		4600	3/31	0.0	0.0	5.9	0.0	22	0.7
Kirk (COPCO)		4533	3/31	0.0	0.0[c]	7.0	T	21	1.9
Beatty (COPCO)		4300	3/31	0.0	0.0	0.0	0.0	25	T
Crystal (COPCO)		4200	3/31	14.0	7.0	16.8	10.2	23	5.6
Harriman Lodge (COPCO)		4200	3/31	0.0	0.0	8.8	0.0	24	1.2
Chiloquin (COPCO)		4187	3/31	0.0	0.0[c]	T	0.0	25	0.1
Fort Klamath (COPCO)		4150	3/31	0.0	0.0	10.1	0.0	26	1.2

*Not located directly on this drainage area.
(COPCO) - Water content determined by melting a measured sample (The California Oregon Power Co.'s Station)
[a]Telegraphic
[b]No survey due to logging operation which has removed all snow from course
[c]Estimated

OREGON SNOW SURVEYS - ABOUT APRIL 1, 1953

DRAINAGE BASIN and SNOW COURSE	Number or State	Elev.	SNOW COVER MEASUREMENTS: Date of Survey	Snow Depth (In.)	Water Content (In.): 1953	Same Approx. Date: 1952	Same Approx. Date: 1951	Past Record: Yrs. of Rcd.	Past Record: Avg. Water Cont. (In.)
GOOSE LAKE BASIN									
Camas Creek	911A	5720	3/30	31.7	11.7	22.1	12.7	14	10.9
Strawberry	837	5600	4/3	15.7	6.8	18.2	6.6	12	6.7
Quartz Mtn.(COPCO)		5504	No Report			12.9	--	21	4.9
Quartz Mountain	811	5320	4/2	13.0	6.2	12.9	3.3	22	4.5
INTERIOR DRAINAGE									
WARNER LAKE BASIN									
*Camas Creek	911A	5720	3/30	31.7	11.7	22.1	12.7	14	10.9
GUANO LAKE BASIN									
Bald Mountain	Nov.1	6720	3/31	0.7	0.4	10.4	1.3	13	3.4
CHEWAUCAN RIVER									
*Summer Rim	841	7200	3/28	53.3	22.8	35.5	20.5	16	17.6
Mill Creek	922	6200	3/30	29.1	13.1	17.0	7.2	14	6.9
*Quartz Mountain	811	5320	4/2	13.0	6.2	12.9	3.3	22	4.5
SILVER LAKE BASIN									
Silver Creek	942	4900	4/1	0.0	0.0	6.9	0.0	12	1.1
HARNEY BASIN									
Fish Creek	952	7900	3/28	65.1	22.1	43.2	32.8	13	26.1
Silvies	951	6900	3/28	27.3	10.0	26.5	15.8	15	14.6
Snow Mountain	965	6300	3/27	47.1	16.2	21.5	16.2	9	15.1
Izee Summit	964	5293	3/30	25.7	8.7	13.8	9.9	17	7.7
Idlewild Camp	961A	5200	3/30	16.8	6.8	10.5	6.7	22	3.9
Starr Ridge	247B	5156	3/30	16.1	5.4	10.5	5.5	17	4.7
Lake Creek	136	5120	3/30	34.7	14.1	15.9	13.5	15	10.1
Rock Spring	134	5100	3/30	13.7	5.3	9.1	5.5	17	4.9
Stinking Water	135	4800	3/31[b]	0.0	0.0	9.2	0.0	12	1.3
ALVORD LAKE BASIN									
*Disaster Peak	Nov.6	6500	3/30	24.8	10.1[a]	36.2	10.9	4	17.2
McDERMITT CREEK									
Disaster Peak	Nov.6	6500	3/30	24.8	10.1[a]	36.2	10.9	4	17.2

*Not located directly in this drainage area.
(COPCO) - Water content determined by melting a measured sample (The California Oregon Power Co.'s Station).
[a]Telegraphic
[b]Date estimated

OREGON SNOW SURVEYS - DELAYED DATA

DRAINAGE BASIN and SNOW COURSE	Number or State	Elev.	SNOW COVER MEASUREMENTS Date of Survey	Snow Depth (In.)	Water Content (In.) 1953	Same Approx. Date 1952	Same Approx. Date 1951	Past Record Yrs. of Rcd.	Past Record Avg. Water Cont. (In.)
MARCH 1, 1953									
GUANO LAKE BASIN									
Bald Mountain	Nev. 1	6720	2/27	2.4	1.0	10.3	4.0	12	4.1
MARCH 15, 1953									
KLAMATH LAKE BASIN									
Lake of the Woods	835	4960	1/15	39.1	15.5	22.3	--	1	22.3
CORRECTION									
ROGUE RIVER									
Scragg Mountain	7220	6200	2/2	60.2	26.2	44.4	23.9	10	18.2

OREGON PRECIPITATION[a]

DRAINAGE DIVISIONS	CURRENT YEAR Oct. 1, 1952-Apr. 1,1953		LAST YEAR Oct. 1, 1951-Apr.1, 1953	
	P	D	P	D
Southeastern	5.02	- 0.87	7.66	+ 1.85
Southcentral	6.02	- 0.28	8.24	+ 2.18
Central	8.31	+ 1.29	7.99	+ 0.73
Columbia River	11.28	+ 0.32	10.88	- 0.29
Wallowa Mountains	10.17	- 1.04	10.16	- 1.12
Blue Mountains	9.53	+ 0.40	10.15	+ 0.52
Southern	22.06	+ 2.61	27.53	+ 8.10
Willamette Valley	42.25	+ 2.69	45.30	+ 4.79

P - Inches Precipitation D - Inches Departure from Normal

Southeastern - Malheur and Owyhee drainages.

Southcentral - Interior Basin drainages and Goose Lake.

Central - Deschutes and Crooked drainages.

Columbia River - Lower valleys of the Walla Walla, Umatilla, John Day, Deschutes and Hood River drainages.

Wallowa Mountains - Imnaha, Wallowa, Catherine, Eagle, and Pine drainages.

Blue Mountains - Upper valleys of the Burnt, Powder, Grande Ronde, Umatilla, Walla Walla, John Day, Silvies and Malheur drainages.

Southern - Umpqua, Rogue and Klamath drainages.

Willamette Valley - All Willamette drainages.

NOTE: Stations used for determining the averages for the current year are not necessarily the same as those used last year.

[a]Preliminary data computed from Weather Bureau records.

INDEX OF SNOW COURSE LOCATIONS

SNOW COURSE	Number or State	Section	Township	Range	Elevation
Althouse	7216	17	41S	7W	4400
Aneroid Lake #1	183	16	4S	45E	7480
Aneroid Lake #2	183A	16	4S	45E	7000
Annie Spring	831	19	31S	6E	6018
Anthony Lake	155	18	7S	37E	7125
Arbuckle Mountain	241	33	4S	29E	5400
Bald Mountain	Nev.1	17	45N	21E	6720
Barney Creek	143	16	14S	36E	5950
Bear Creek	Nev.1	31	46N	58E	7800
Beatty (COPCO)	Oreg.	22	36S	12E	4300
Beaver Reservoir	188	8	5S	37E	5340
Beech Creek Summit	246A	4	12S	30E	4800
Big Bend	Nev.6	30	45N	56E	6700
Big Bottom	**	25	6S	7E	2118
Big Red Mountain	729	31	40S	1W	6500
Billie Creek Divide	722	30	36S	5E	5300
Black Pine Spring	**	14	16S	9E	4600
Blue Mountain Springs	133	21	15S	35E	5900
Blue Mountain Summit	141	6	12S	36E	5098
Bly 101 Ranch (COPCO)	Oreg.	22	35S	14E	4800
Bourne	154	33	8S	37E	5800
Breitenbush	551	21	9S	7E	2325
Brooks Meadows	431	2	2S	10E	4300
Caldwell Ranch	326	30	21S	8E	4400
Camas Creek	911A	5	39S	21E	5720
Camp Carson	187	33	6S	36E	5970
Cascade Summit	321	7	23S	6E	4880
Champion	522	12	23S	1E	4500
Charlton Lake	327	23	21S	6E	5750
Chemult	834	21	27S	8E	4760
Chiloquin (COPCO)	Oreg.	34	34S	7E	4187
Clackamas Lake	592	35	5S	8½E	3400
Clear Lake	361	29	4S	9E	3500
Coverdale	171	22	5S	47E	4250
Crane Prairie	137	24	16S	34E	5375
Crescent Lake	325	11	24S	6E	4760
Crowder Flat	Calif.	30	47N	11E	5200
Crystal (COPCO)	Oreg.	26	34S	6E	4200
Derr	343	14	13S	23E	5670
Dead Horse Grade	**	13	16S	7E	3800
Detroit Dam	**	7	10S	5E	1580
Detroit (new town)	**	1	10S	5E	1500+
Diamond Lake	743	29	27S	6E	5315
Disaster Peak	Nev.6	8	47N	34E	6500
Dixie Springs	244	28	11S	34E	6650
Dooley Mountain	156	32	11S	40E	5430

(COPCO) - Water content determined by melting a measured sample. (The California Oregon Power Co.'s Station)

** - Auxiliary snow station; average of 3 to 5 samples taken at same point each survey.

INDEX OF SNOW COURSE LOCATIONS (Cont'd)

SNOW COURSE	Number or State	Section	Township	Range	Elevation
Eilertson Meadows	151B	18	8S	38E	5400
Emigrant Springs	222	29	1N	35E	3925
Fish Creek	952	4	33S	33E	7900
Fish Lake	725	3	37S	4E	4865
Fort Klamath (COPCO)	Oreg.	22	33S	7½E	4150
Fourmile Lake	7223	9	36S	5E	6000
Fox Creek	Nev.2	33	46N	58E	6800
Fry Canyon	Nev.7	31	43N	54E	6700
Gerber	839	12	39S	13E	4850
Gold Center	249	21	9S	36E	5340
Gold Creek	Nev.5	31	45N	56E	6600
Golden Curry Creek	***	1	23S	1E	3136
Goodrich Lake	157	34&35	8S	38E	6775
Granite Peak	Nev.4	22	44N	39E	7800
Grayback Peak	727	9	40S	5W	6000
Greenpoint Reservoir	433	28	2N	9E	3400
Harriman Lodge (COPCO)	Oreg.	3	36S	6E	4200
Hobart Lake	7221	17	40S	3E	5010
Hogg Pass	351	24	13S	7½E	4755
Hungry Flat	***	30	18S	11E	4400
Hyatt Prairie Reservoir	723	15	39S	3E	4900
Idlewild Camp	961A	33	20S	31E	5200
Irish-Taylor	329	25	20S	6E	5500
Izee Summit	964	28	16S	29E	5293
Kirk (COPCO)	Oreg.	1	33S	7E	4533
Lake Creek	136	10	16S	33½E	5120
Lake Harriet	***	4	6S	7E	2045
Lake of the Woods	835	11	37S	5E	4960
Layng Creek R.S.	***	31	21S	1E	1200
Little Red Mountain	7210	25	40S	2W	6500
Lost Creek Ranch	***	24	16S	6E	1956
Lower Buckskin	Nev.1	25	45N	39E	6700
Lower Jack Creek	Nev.9	18	42N	53E	6800
Lucky Strike	223	28	3S	32E	5050
Lund Park	***	22	22S	1E	1740
Marion Forks	553	28	11S	7E	2730
Marks Creek	344	25	12S	19E	4540
Martin Creek	Nev.3	18	44N	40E	6700
Mary's Peak	541	21	12S	7W	3620
McCredie Spring	***	36	21S	4E	2120
McKenzie	531	35	15S	7½E	4800
McKenzie Bridge	***	13	16S	5E	1372
Meacham	221	24&25	1S	35E	4300
Meridian Dam	***	13	19S	1W	750
Midas	Nev.6	18	39N	46E	7200
Mill Creek	922	1	34S	17E	6200
Mill City	***	29	9S	3E	826
Moss Spring	186A	28	3S	41E	5850
New Crescent Lake	325A	11	24S	6E	4800
New Dutchman Flat	324A	21	18S	9E	6400
North Umpqua	742	19	26S	6E	4215
Oakridge	***	16	21S	3E	1310
Ochoco Meadows	341	21	13S	20E	5200
Olive Lake	245	14	9S	33½E	6000
Park Headquarters	838	8	31S	6E	6450

INDEX OF SNOW COURSE LOCATIONS (Cont'd)

SNOW COURSE	Number or State	Section	Township	Range	Elevation
Peavine Ridge	59 I	14&15	6S	7E	3500
Phlox Point-Mt. Hood	452	6	3S	9E	5600
Quartz Mountain	811	2	38S	16E	5320
Quartz Mountain (COPCO)	Oreg.	33	37S	16E	5504
Railroad Overpass	***	27	22S	5E	2750
Red Hill	434	21	1S	9E	4400
Rock Spring	134	23	18S	32E	5100
Rodeo Flat	Nev.8	36	43N	53E	6800
Salt Creek Falls	***	33	22S	6E	4000
Santiam Junction	552	14	13S	7E	3990
Schneider Meadows	161	35	6S	45E	5400
Schoolmarm	248	28	4S	34E	4775
Scragg Mountain	7220	9	47N	10W	6200
Seven Lakes #1	7211	3	34S	5E	6800
Seven Lakes #2	7212	26	33S	5E	6200
Silver Burn	7219	30	30S	4E	3720
Silver City	Ida.12	6	5S	3W	6400
Silver Creek	942	25&26	29S	13E	4900
Silvies	951	35	32S	33E	6900
Siskiyou Summit	728	17	40S	2E	4630
Snow Mountain	965	1	19S	26E	6300
South Fork Canal	7218	12	33S	3E	3500
South Mountain #2	Ida.13	35	7S	5W	6340
Starr Ridge	247B	20	15S	31E	5156
Still Creek	451	25	3S	8½E	3700
Stinking Water	135	33	21S	34E	4800
Strawberry	837	4	40S	16E	5600
Summer Rim	841	15	33S	16E	7200
Summit Springs	184	9	6S	37E	6000
Sun Mountain	836	22	32S	7½E	5350
Tamarack	342	8	15S	25E	4800
Tangent	***	28	18S	10E	5400
Taylor Butte	842	16	33S	11E	5100
Taylor Canyon	Nev.12	35	39N	53E	6200
Taylor Green	185	3	6S	42E	5740
Three Creeks Meadows	331	3	17S	9E	5600
Tilly Jane-Mt. Hood	432	15	2S	9E	6000
Tipton	142	34	10S	35½E	5100
Tollgate	212	32	4N	38E	5070
Trap Creek	741	1	27S	4E	3800
Tremewan Ranch	Nev.11	9	39N	55E	5700
Upper Buckskin	Nev.2	11	45N	39E	7200
Upper Jack Creek	Nev.10	9	42N	53E	7250
Vidae	***	28	16S	2E	800
Wagner Butte	7213	1	40S	1W	6900
Waldo Lake	521A	15	21S	6E	5500
Weaver Creek	***	35	22S	1E	2440
Whaleback	7217	3	31S	2E	5140
White Branch Slide	***	15	16S	7E	2800
Whitewater Bridge	***	28	10S	7E	2175
Willamette Pass	323	21	24S	5½E	5600
Windigo	744	20	25S	6E	5800
Yamsey (COPCO)	Oreg.	20	31S	11E	4600
76 Creek	Nev.4	6	44N	58E	7100

Tho following organizations cooporato in tho Orogon snow survoy work:

STATE

Idaho Cooporativo Snow Survoys
Novada Cooporativo Snow Survoys
Orogon Agricultural Exporimont Station
Oregon Stato Engineor and corps of Stato Watermastors
Orogon State Highway Engineors

FEDERAL

Dopartmont of Agriculturo
  Forost Sorvico
  Soil Consorvation Sorvico
Dopartmont of Commorco
  Woathor Bureau
Dopartmont of tho Interior
  Bonnovillo Powor Administration
  Buroau of Roclamation
  Fish and Wildlifo Sorvico
  Goological Survoy
  Indian Sorvico
  National Park Sorvico
Dopartmont of National Dofonso
  Army Enginoor Corps

PUBLIC UTILITIES

California-Pacific Utilitios Company
Portland Gonoral Electric Company
Tho California Orogon Powor Company

MUNICIPALITIES

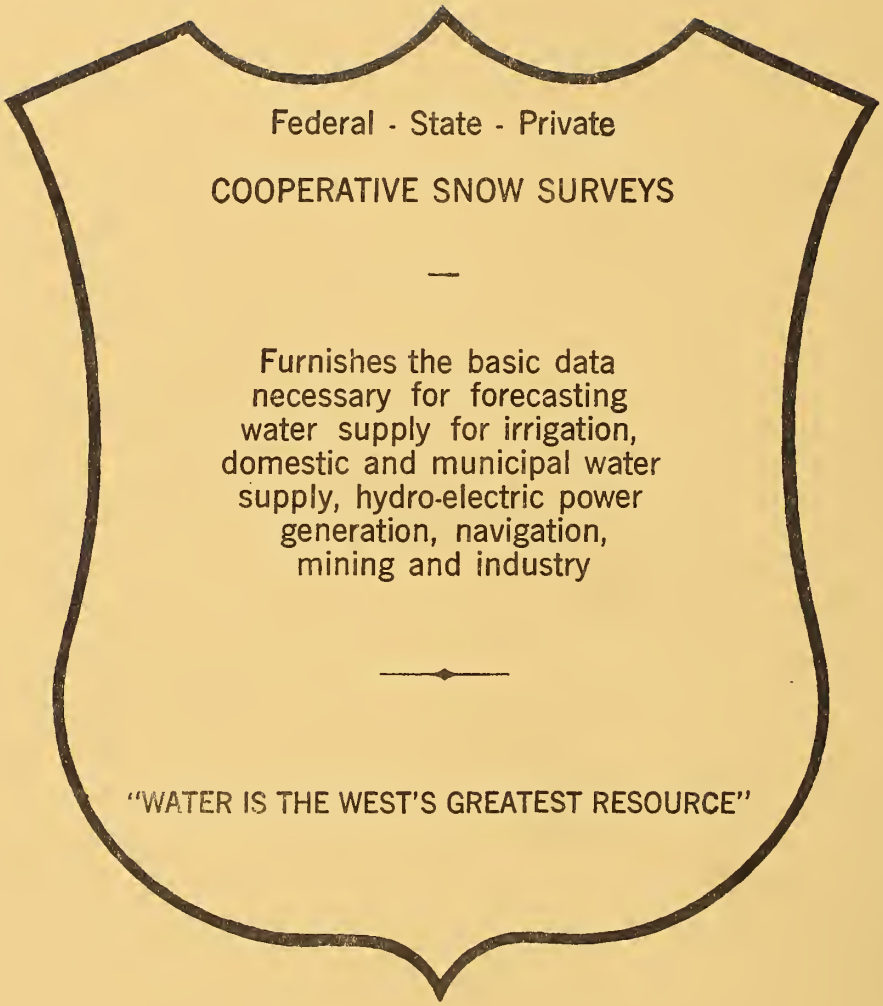
City of Bakor
City of La Grando
City of The Dallos

IRRIGATION DISTRICTS

Associatod Ditch Companios
Contral Orogon Irrigation District
Doschutos County Municipal Improvomont District
East Fork Irrigation District
Grants Pass Irrigation District
Jordan Valloy Irrigation District
Lakoviow Wator Usors, Incorporatod
Modford Irrigation District
Ochoco Irrigation District
Roguo Rivor Irrigation District
Talont Irrigation District
Valo-Orogon Irrigation District
Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

Amalgamatod Sugar Company
South Wasco Soil Conservation District
Tho Crag Rats, Hood Rivor, Orogon


Federal - State - Private
COOPERATIVE SNOW SURVEYS
Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry
"WATER IS THE WEST'S GREATEST RESOURCE"